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## Expository Methods of Bundles HAP Affected the Implementation of HAP Prevention of Adult Inpatient Unit



Lia Pratiwi<sup>1</sup>, Yosi Maria Wijaya<sup>2</sup>, Monica Saptiningsih<sup>3</sup>

<sup>1,2,3</sup>Nursing Department, STIKes Santo Borromeus Bandung, Indonesia

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### Abstract

Hospital-acquired pneumonia (HAP) incidents in private hospitals in Bandung reached 0.11 % -1.03 %. HAP affects the quality of hospital services related to patient safety. One of the methods used for socializing implementation of HAP prevention was the expository method means learning method that is directly implemented to maintain contact between the speaker and audience. The purpose of this study was to determine the effect of the expository method of education on HAP bundles on the implementation of HAP prevention in the adult inpatient units. The study was designed by pre-experimental design one group pretest-posttest. A total of 16 associate nurses were part of the research using the purposive sampling technique in the adult inpatient units. The variable in the study was the implementation of HAP prevention which was measured by using an observation sheet. Wilcoxon tests were used to compare the scores between pretest-posttest. The researched result was P-value 0.000 (P-value <  $\alpha$  0.05), meaning the expository method of education on HAP bundle affected the implementation of HAP prevention in the adult inpatient unit. Suggestions derived from this study are to advise the infection prevention and control committee to implement the expository method in socializing bundles to prevent infections categorized as HAIs to health workers and to perform a regular evaluation.

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✉Correspondence Address:

STIKes Santo Borromeus Bandung - East Java, Indonesia

Email : [yosiemaria@gmail.com](mailto:yosiemaria@gmail.com)

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## INTRODUCTION

Currently, hospitals are required to better provide services based on the quality of care that focuses on patient safety (Sumarni, 2017). Patient safety is one of the dimensions of the quality of focus of health care practitioners on a global scale. In Indonesia, the quality-of-service quality to guarantee patient safety refers to the Minister of Health of the Republic of Indonesia Number 1691 / Menkes / PER / VIII / 2011 states that hospitals must meet the six goals of patient safety, where one of them is; reduction of risk of infection related to health care, where infection acquired from hospital services categorized into Healthcare-Associated Infections (HAIs).

World Health Organization (WHO) 2010 states HAIs are undesirable effects (adverse effects) this leads to morbidity, mortality, and financial losses in the health sector. Ministry of Health Indonesia no.27 stated that surveillance of healthcare-associated infections (HAIs) is grouped into different categories, such as urinary tract infection, peripheral bloodstream infections, infection of the operating area, decubitus, ventilator acquired pneumonia (VAP), hospital-acquired pneumonia (HAP). Previous research discloses the data through retrospective method found cases in 21 hospitals in the USA in 2014 identified 1300 patients with HAP (0:12 to 2:28 incidence rate per 1000 patients), 70.8% of infections acquired outside services HAP Intensive Care Unit (ICU), and 18.8% of cases require a transfer to the ICU (Baker & Quinn, 2018). Furthermore, most cases do not have standard interventions aimed at the prevention of pneumonia within 24 hours of diagnosis. Data of WHO in 2015, there were 920 136 incidents of deaths due to pneumonia. Meanwhile, based on the data Riskesdas (2013) the incidence of pneumonia prevalence at all ages was as much as 0.6% during the period 2007-2013. The prevalence of HAP in a private hospital in the city of Bandung in 2017 is in the range of 0.11 to 1.03%.

HAP is an infection there are no symptoms at the time of hospital admission and found symptoms of infection after more than 48 hours of admission, occurs at all ages, including the young, especially in hospitalized patients who have undergone prolonged care (Quinn et al., 2014). These conditions can lead to increased financing costs for hospitals a very adverse influenced by the length of stay (LOS). The phenomenon is not currently any

obvious effort in the prevention of HAP is supported by the statement of the Committee on the Prevention and Control of infection (KKPPI) private hospital in Bandung, which states that there has to be disseminated to employees about HAP, but the lack of standard procedures related to preventive action against HAP.

Nurse's knowledge can be gained through a variety of media education, where education can be presented either by using Expository. Expository is a method of education by providing the material in a structured and easy to understand effectively. Methods Expository is a learning strategy and delivery technique material in chalk and Talk, which is a learning strategy that is given directly, by maintaining contact between the donor material and the audience, in this strategy giver material plays a very dominant while the focus of this strategy is the academic achievement (Heriawan & Darmajari & Sanjaya, 2012). With the success of education is given it is expected that one's knowledge has increased.

Procedures for preventive action against HAP can be done by health workers, especially nurses such as hand hygiene, 30° head-up position; oral care; enteral nutrition management via Naso Gastric Tube (NGT); management secretion at risk of aspiration; changes position every 2 hours in total bed rest patients or patients with limb weakness; effective cough; and breathing exercises (Fox, Frush, Chamness, Malloy, & Hyde, 2015; Quinn et al., 2014). Standard Operating Procedures are ruled that must be adhered to by any health officer for the prevention of HAP. With the implementation of clear procedures on the implementation of preventive HAP, nurses are expected to be able to do HAP prevention implementation following the standard operational procedure, which is expected by the implementation of a good implementation. Therefore, this study aims to examine the effect of education based on the expository method with the implementation of HAP prevention.

## METHOD

This was a pre-experimental study with one group pretest-posttest design. This study intended to determine the effect of education on methods expository bundles HAP to the implementation of prevention carried out by nurses associate techniques used in the adult inpatient unit at a private hospital in Bandung. The sample used 16

nurses associates with the purposive sampling technique in adult inpatient unit which had a service life  $\geq 1$  year and became permanent employees. The variable was the implementation of bundles HAP to prevent HAP among adult inpatient unit. The data collection technique used in a cross-sectional observational method at the stage of pre-tests on all respondents were observations conducted in the morning and evening, when they do nursing care in patients with total care of the implementation of the HAP prevention, the observation sheet instruments. Once the researchers

had completed pretest, then researchers perform education aimed at expository methods of bundles HAP. Education was conducted on 45-minute in one meeting, with the learning strategy using expository methods, in which it maintained direct contact with audiences, and the materials that were presented can be structured. The post-test stage, researchers observed using the same instruments in the pretest stage. The data analysis was conducted by using the Wilcoxon test and the results are displayed in table form.

**RESULT**

**Table 1:** Frequency distribution of implementation bundles HAP before being given education using an expository method

Implementation Bundle HAP	Frequency	Percent (%)
Yes	0	0
No	16	100
Total	16	100

Source: Primary Data

**Table 2:** Frequency distribution of implementation bundles HAP after being given education using an expository method

Implementation Bundle HAP	Frequency	Percent (%)
Yes	10	62.5
No	6	37.5
Total	16	100

Source: Primary Data

Pretest value of at least 3, maximum 8, while the posttest score of at least 7 maximum value 9. In the Wilcoxon analysis test, it shows that P-value = 0,000 then compared with coefficient alpha ( $\alpha$ ) < 0.05, it can be concluded that there is an influence of education methods expository about Bundles HAP with the implementation of the prevention of HAP.

**DISCUSSION**

The result of the pre-test phase obtained all respondents (100%) did not complete the HAP bundles in nursing care given. In the implementation phase, the nurse should know the factors that influence the nursing care to patients, some of these factors include: the ability of intellectual, technical, and interpersonal skills; ability to assess new data; creativity, and innovation in making modifications to a plan of action; The ability to ensure the comfort and safety as well as efficacy measures, These factors can affect the quality of services provided by health professionals, especially nurses (Budiono, 2015). The previous study suggest that a nurse's adherence to the risk prevention of infection is affected by a knowledge of the measures given, motivation, workload, availability of facilities, and

supervision (Umboh, Doda, & Kandou, 2016).

This study showed that nurse's education background already meets the regulations set by the government, which is more than half of the respondents to a Diploma III (62.50%) as a vocation, while less than half respondents (37.50%) were undergraduate nursing. Supposedly the higher level of education, the implementation of the prevention of HAP will get better, but in this study already meet the minimum standards of education but implementation HAP prevention implementation has not been implemented by all respondents, this case illustrates that a person's level of education does not guarantee a person's behavior by implementing preventive measures HAP. The results of this study are supported by research states that there is no relation to the observance of one's education level in the

implementation of infection prevention (Amalia, Widagdo, & Syamsulhuda, 2016). The role of nurses in addition to a nurse's caregiver but also as a client advocate, counselor, educator, collaborator, coordinator, change agent, and consultant and therefore the nurse must have a willingness to increase the awareness of health professionals in the study (Budiono, 2015).

Judging from leveling characteristics showed that half of the respondents are at level 1 (50%), the study showed that HAP prevention implementation is not done by level 1 as much (25%) of respondents, where level 1 nurse working period is 1-3 years, according to data obtained from the nurse level 1 KKPPi that are still not entirely socialized HAP exposure prevention education organized by hospitals, this greatly affect a person's knowledge of the HAP prevention knowledge. The statement was reinforced that the longer a person works, the skills and experiences in the field of employment will also be increased (Nurani & Hidajah, 2017).

The test results obtained scores of pretests statistical value of minimum 3, maximum 8, while the post-test score of at least 7 maximum value 9, P-value obtained 0,000 then compared with coefficient alpha ( $\alpha$ ) = 0:05; then the P-value <  $\alpha$ . It can be concluded that there is an influence of Ha Accepted expository method of education Bundles HAP to the implementation of prevention in the adult inpatient unit.

Educational methods expository on the implementation of the prevention Bundle HAP allows respondents get a piece of new knowledge about preventive measures HAP in the implementation of nursing care in patients undergoing a period of hospitalization. Method expository is used to maintain direct learning strategies (chalk and talk), this method combines lectures, drills, discussions and demonstrations (Safriadi, 2017).

The topic presented during nursing education contains 9 actions, each action is based on the standard operating procedures (SOP) of private hospitals and supported by theory. However, from 9 nursing actions, they found three actions carried out by the respondents include secretion management, sedation, and education management. Bundle socialization HAP can be managed well to improve knowledge of health workers, especially nurses in the prevention of HAP in a private hospital in Bandung. with the socialization on

IPCLN were then reviewed again in the form of in-house training in each section, to increase their knowledge as well as the renewal of nurses in nursing and rational implementation of measures in prevention efforts.

Results of analysis of the effect of educational methods expository on bundles of HAP to the implementation of the prevention of HAP in the inpatient unit adult, that 16 respondents at the stage of pre-test do not carry out the implementation of the prevention of HAP, based on the results of observations made using instruments such as observation sheet containing 9 nursing actions, which is HAP prevention efforts based on theory and PMK No. 27 in 2017. it concluded all respondents (100%) did not carry out the implementation of the HAP prevention in the adult inpatient unit. Previous research stated that the nurse had never received training on the prevention of infection, affecting the implementation of the nursing care given (Marbun, 2018).

In the post-test visible difference on the observation post given expository method of educating the HAP bundles with, education was given one with a duration of 45 minutes, the implementation of the intervention in this study is in daylight when the turn of duty the morning to afternoon service. The results of observation at the stage of post-test indicate a change. 10 of 16 respondents carry out the implementation of the prevention of HAP with complete bundles. And 6 respondents did not carry out the implementation of preventive bundles HAP.

The expository method can be used as a learning strategy in education-related bundles HAIs in health care because the expository method focuses on giving the topic and maintaining direct contact with the audience so that the material can be given in structured learning. With continuous learning the nurse's knowledge about the prevention of HAP gets better, former study states the implementation of infection prevention depends on knowledge, attitudes, facilities, and supervision of nurse's knowledge in the implementation of nursing actions and rationale in prevention efforts. (Marbun, 2018; Sapardi, Machmud, & Gusty, 2018).

Nursing actions that have not been done by the respondents in this study in the posttest phase include secretion management, assessment of sedation, and education. Need to do education on an ongoing basis to increase the knowledge of

nurses in the prevention of HAP, especially nurses associate with tenure level 1 count in the stage adaptation, to level 1 work period of 1-3 years is a period of adjustment with this background, the associate nurse still requires knowledge the prevention of HAP and reinforced by statement that the willingness to raise awareness of health professionals in learning, knowing and applying the evidence-based practice in nursing, will add to the knowledge or cognitive, where domain knowledge is very important to establish a person in his actions (Elysabeth, Libranty, & Natalia, 2015). Behavior-based on knowledge would be more true, than behavior without based on knowledge (Notoatmodjo, 2010).

### CONCLUSION

There is the influence of education bundles HAP with methods expository to the implementation of the prevention HAP in adult inpatient unit (P-value=0.000). The implication of this study Expository methods can be used as learning strategies in the education of health care, not limited to HAP prevention implementation topics, but may be a method for education of other topics, with the hope that nurses at health services become more informed and can improve patients' safety.

### SUGGESTION

The recommendations drawn from this study were to advise the infection prevention and control committee to implement an expository approach in a socialization bundles HAP to prevent infections classified as HAIs for healthcare practitioners and carry out evaluation regularly.

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### CONFLICTS OF INTEREST

The authors declare that there is no conflict interest with the topics or any associated objects upon the publication of this research.

### AUTHOR CONTRIBUTION

The authors confirm contribution to the paper as follows: study conception and design: first and second author; data collection: first author; analysis and interpretation of results: all authors; draft manuscript preparation: first and second authors. All authors reviewed the results and approved the final version of the manuscript.

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