

DESCRIPTION OF INDIVIDUAL CHARACTERISTICS IN NURSES: A STUDY ON THE NEEDLE EVENTS IN HOSPITAL X HOSPITAL BEKASI DISTRICT

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ABSTRACT

Accidents that often occur in health care are used needle puncture wounds used to inject patients. Nurses are the main category of healthcare professionals who are vulnerable to NSI. Needle Stick Injury (NSI) is an accident caused by needling that is contaminated with blood or body fluids of the patient. Impacts that can be caused by needle sticking include contracting the disease from an infected patient. The purpose of this study was to determine the description of the characteristics of individuals in nurses who experienced the incidence of needling in the inpatient room of the hospital in Bekasi district in 2017-2018. The research design used is a case series research design or case study, where all the observed variables are the variables that experienced a case of needling in the Inpatient Room of X Hospital in Bekasi district in 2017-2018. The results showed that the highest proportion of sex characteristics of nurses who experienced the incidence of needling in the highest inpatient room were female sex as many as 13 nurses (92.9%). The highest proportion of age characteristics is <30 years as many as 10 nurses (71.4%). The highest proportion of education characteristics of nurses who experienced the incidence of needling with SI education was 8 people (57.1%). The highest proportion of the characteristics of the length of service of nurses who experienced the incidence of needling with a work period of <3 years is as many as 7 people (50%). The highest proportion of nurse respondents who experienced a pin prick was 9 nurses (65%) had not been trained on NSI.

Keywords: *Needle Incidence, Occupational Accidents*

PRELIMINARY

Needle Stick Injury (NSI) or needle stick injury is an accident due to needling that is contaminated with blood or body fluids (Pangalila, 2007). Accidents that often occur in health care are used needle puncture wounds used to inject patients. Accidents that often occur in health services are needling injuries during patient care (Spiritia Foundation, 2009). Nurses are the main category of healthcare professionals who are vulnerable to NSI. In general, the incidence of NSI is experienced by nurses. Many countries have reports of an increase in the number of NSI events even though prevention efforts have been made (Senduk, 2017).

Helmi, (2016) states that in the United States more than 800,000 injuries due to needle sticking to health workers occur every year despite ongoing education and accident prevention efforts. Survey obtained by the Centers for

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Disease Control and Prevention (CDC) as many as 77% of occupational accidents in hospitals (hospitals) are punctured. It is estimated that every year there are 385,000 incidents of injuries caused by sharp objects contaminated with blood on health workers in hospitals in America (Safetysyringes, 2011). The incidence of needle sticking in Indonesia is still relatively high. In the Decree of the Minister of Health of the Republic of Indonesia Number: 1087 / MENKES / SK / VIII / 2010 including research Josep in 2005-2007 noted that work accidents due to needles reached 38% -73% of the total staff health (Ardila, 2017). Research conducted at the District X Hospital in Indonesia states that the number of nurses who suffered needling injuries and other sharp objects is quite high at 61.34% (Senduk, 2017). Based on work accident data in Bekasi Regency, 1,294 cases were reported in which 980 of them were needle punctured work accident cases (Health Office, 2018) One of the individual factors is characteristics of gender, age, level of education, years of service and training (Notoatmodjo, 2007).

In a related study not found with the same research design, but following different research designs with the same characteristics. According to research (Yusran, 2013) Of the 75 nurses the percentage of male nurses was 33.33% (25 people) and nurses with female sex were 66.65% (50 people). According to research (Mapanawang, 2017) states that of the 72 nurses who were punctured by needles the percentage of nurses with age <30 years was 37 respondents (51.4%) and nurses with age > 30 years were 35 respondents (48.6%) on needling. Based on research conducted by (Meilawati, 2019) about the incidence of needling wounds to nurses at Bhayangkara Brimob Hospital in 2018 stated that out of 54 nurses who were pricked by 38 people (70.3%) with a work period of ≤ 3 years and as many as 16 people (29.6%) with years of service > 3 years. And the research (Mapanawang, 2017) shows that in the Diploma-educated case group of 14 respondents (19.7%) S1 education in the case group was 58 respondents (80.6%) in the case of needling. In Research (Puspitasari, 2012). The results showed that 60 nurses there were 22 (36.7%) nurses who had followed the training and 38 nurses (63.3%) who had not yet participated in the training of needling events.

Impacts that can be caused by needle sticking include contracting an illness from an infected patient such as contracting Hepatitis B and C where hepatitis B and C are chronic diseases of the liver. Another impact that can be caused by being pricked is contracting HIV which can also be transmitted through syringes used by people with HIV (Pangalila, 2007). In addition to increasing the risk of spreading infection, NSI can increase costs incurred by health service providers where these costs include serological examinations for further investigation, consultation and diagnosis to health workers, as well as influencing the work time of health workers (Adams, 2006). According to the World Health Report (2017), health workers are exposed to diseases caused by syringe injuries, namely 2.5% are exposed to HIV, 40% are exposed to Hepatitis B and Hepatitis C, while transmission of the virus through blood borne in workplace accidents by needles is 30% Hepatitis virus B, 3% Hepatitis C and 0.3% for the HIV virus.

Hospital X Bekasi Regency is the most popular general hospital in Bekasi Regency which has been operating since 2002 by pocketing the 2012 version of KARS accreditation standard and began serving BPJS health patients since November 2014 with as many as 16,113 visits and 13,654 inpatient visits annually. Inpatient care is the main medical treatment in the hospital and is a place for long-term interactions between patients and hospitals. Based on the Kertusuk Needle Accident Report Hospital X Bekasi District (2018) stated that the incidence of needle punching occurs most often in nurses in the inpatient room because of the high injection activity in patients and units receive the most number of patient visits compared to other units.

The incidence of needling in nurses is still often evident from reports of needle punctured exposure and needle data of nurses who have been pricked at Hospital X in Bekasi Regency in 2017-2018. -2018 such as gender, age, education, years of service and NSI training. In the case of needling in nurses in the inpatient room X of Bekasi district during 2017-2018 there were no nurses infected with hepatitis B and C where hepatitis B and C, and other diseases of patients at risk, but the incidence of needling caused increasing costs (costs) that must be incurred by the hospital X Bekasi district which costs include serological examinations for further investigation, consultation and diagnosis to health workers such as follow-up laboratory examinations for nurses at risk of contracting the disease from the syringe used by previous patients (K3 Section X Bekasi Hospital, 2017-2018).

Based on (Notoatmodjo, 2007) one of the individual factors that influence performance is the characteristics of gender, age, education, years of service and training. Which is where women are more vulnerable to being pricked compared to male nurses because based on the number of professions engaged in the nursing profession, female nurses tend to be more engaged in the nursing profession quantitatively and female nurses are less male nurses. The characteristics of age ≤ 30 years are more likely to be alert and unfocused, and have less emotional control, while > 30 years are more careful, more trustworthy and more aware of the dangers than young workers (Hasibuan, 2003). During the work period affects the experience, which according to (Suma'mur, 2009) states that a person's experience to recognize the hazards in the workplace will improve with age and work period, so that older workers will be more familiar with the danger points at work those who finally can minimize the occurrence of errors that can

lead to work accidents, which classification of the working period is divided into two categories, namely the working period of the new category ≤ 3 years and the working period of the old category > 3 years (Handoko, 2010). In the Characteristics of education are all efforts planned to influence someone to support health services and can collaborate well so that they do what is expected of the education practitioners well, which is the classification of higher education according to Law no.38 of 2014 in article 5-8 consists of diploma and undergraduate education. In training characteristics is a process where people achieve certain abilities to achieve organizational goals and provide employees with specific knowledge and can support their work. This causes researchers to be interested in choosing individual characteristics into their research.

To protect and prevent transmission of infections for health workers and patients of Hospital X, the standard operating procedures (SOP) for injecting and administering SOPs after needling have been followed by nurses in Bekasi X Hospital in conducting their clinical activities. The prevention program carried out by Bekasi X Hospital in the form of a Needle Management Program for paramedics which includes BTA (Acid Resistant Bacteria) sputum examination, before the staff had been infected with Hepatitis B and diphtheria vaccine. Assessing the source of exposure of patients with diagnoses of fetigo and hypertension and the patient is a new patient with no previous laboratory check history. Monitoring staff in the field of compliance procedures and assistive devices and re-socialization of NSI (Needle Stick Injury) emphasis for new employees. Laboratory examination after examination of the patient's disease history at risk (K3 Section X Hospital Bekasi, 2018).

RESEARCH METHODS

This research uses quantitative methods that are descriptive. Quantitative approach is carried out by submitting survey samples, namely by collecting information from some elements of the population (nurses) selected (samples) to represent the entire population (nurses). The design used is a case series or case study, where all the observed variables are variables that have a case of needling and aim to find out the Characteristics of Individual Nurses in Needles Occurrences in Inpatient Room X Hospital Bekasi District in 2017-2018. Timing of the study was carried out from December 2019 - February 2020, and data collection was carried out in January. Secondary data in this study were obtained from needle punctured report data for 2017-2018 paramedics and needle punctured sheet report forms at the Hospital in 2017-2018 as a general description of Hospital X in Bekasi District, the number of nurses who were pricked by needles in the X hospital Bekasi Regency, gender, age, years of service, education, and NSI training. The population in this study were all nurses who experienced the incidence of needling in the inpatient room of X District Bekasi Hospital in 2017-2018. The number of people who were pricked by a needle in this study were 14 respondents.

RESEARCH RESULT

1. Description of Gender in nurses who are punctured by needles in hospital X Bekasi district in 2017-2018

Based on the sex variables collected using a checklist sheet measuring tool by looking at the annual reports of nurses who have been pricked by needles and the nurses who have pricked data forms in 2017-2018.

Table 4.1

Distribution of Nurse Respondents Distribution of Needles Based on Gender in Hospital X

| Sex | Frekuensi (n) | Persentase (%) |
|--------|---------------|----------------|
| Male | 1 | 7,1% |
| Female | 13 | 92,2% |
| Amount | 14 | 100% |

Based on the table above it can be seen that from 14 respondents nurses who were pierced by needles obtained the highest proportion of female respondents as many as 13 people (92.9%), and the lowest proportion was found in nurse respondents who were male as many as 1 person (7, 1%).

1. Picture of Age in Nurses with Needles Poked in Hospital X Bekasi Regency in 2017-2018

Based on the age variable collected using a checklist sheet measuring tool by looking at the annual reports of nurses who are pierced by needles and data forms of nurses who are pierced by needles in 2017-2018.

Table 4.2

Distribution of Nurse Respondents Distribution of Needles by Age at Hospital X

| Age | Frekuensi (n) | Persentase (%) |
|--------|---------------|----------------|
| > 30 | 4 | 28,6% |
| ≤ 30 | 10 | 71,4% |
| Amount | 14 | 100% |

Based on the above table, it can be seen that from the 14 respondents who were punctured by nurses, the highest proportion of nurse respondents with age <30 was 10 people (71.4%), and the lowest proportion was found in nurse respondents with age > 30, 4 people. (28.6).

1. Overview of Education of nurses who are pricked by a X hospital in Bekasi district in 2017-2018

Based on the education variables collected using checklist measurement tools by looking at the annual reports of nurses who are pierced by needles and data forms of nurses who are pierced by needles in 2017-2018.

Table 4.3

Overview of Nurse Respondents Distribution of Needles Based on Education in Hospital X

| Education | Frekuensi (n) | Persentase (%) |
|-----------|---------------|----------------|
| S1 | 8 | 57,1% |
| D3 | 6 | 42,9% |
| Amount | 14 | 100% |

Based on the above table, it can be seen that from 14 nurse respondents who were punctured by a needle, the highest proportion of nurses with S1 education was 8 people (57.1%), and the lowest proportion was found in nurse respondents with D3 education, namely 6 people (42.9%).

1. Description of the working period of the nurses who were pricked by a needle at X Hospital Bekasi district in 2017-2018

Based on the length of service variables are collected using a checklist sheet measuring tool by looking at the annual reports of nurses who are needling and needle data of nurses who are pricked in 2017-2018.

Table 4.4

Distribution of Nurse Respondents Distribution of Needles Based on Work Periods at Hospital X

| Work Periods | Frekuensi (n) | Persentase (%) |
|--------------|---------------|----------------|
| > 3 | 7 | 50% |
| ≤ 3 | 7 | 50% |
| Amount | 14 | 100% |

Based on the above table, it can be seen that from 14 nurse respondents who were pierced by a needle, the proportion of nurses with working period <3 years was 7 people (50%), and the proportion of nurses working years with > 3 years of service was 7 people (50%).

1. Description of NSI training for nurses who are pricked by needles in hospital X in Bekasi district in 2017-2018

Based on the NSI training variables collected using a checklist sheet measuring tool by looking at the annual reports of nurses who are needling and needle data of nurses who are pricked in 2017-2018.

Table 4.5

Distribution of Nurse Respondents Distribution of Needles Based on NSI Training at Hospital X

| NSI Training | Frekuensi (n) | Persentase (%) |
|--------------|---------------|----------------|
| Already | 5 | 35% |
| Not yet | 9 | 65% |
| Amount | 14 | 100% |

Based on the above table, it can be seen that from 14 respondents who were punctured by nurses, the highest proportion of nurses who had not received NSI training was 9 people (65%), and the lowest proportion in NSI training was nurses who had NSI training, namely 5 nurses. (35%).

DISCUSSION

1. Characteristic Description of the Sex of the Nurse Stabbed by a Needle in Hospital X Bekasi Regency in 2017-2018

Based on the results of secondary data obtained from the annual report of needling and needle punctured exposure form 2017-2018, obtained data from 14 nurses who have experienced the event of needling, the most nurses respondent by sex are nurses with female gender as many as 13 nurses (92.2%).

This is in line with research (Yusran, 2013) where in the event of needling obtained from 75 nurses, the percentage of male nurses was 33.33% (25 people) and nurses with female sex were 66.65% (50 person). This is caused by the fact that the majority of nurses who work are more female than male, so in the case of NSI the female sex is also more than male, because the number of female nurses who work is 2 times more than male men, and women get tired more quickly because they have less physical endurance than men, thus affecting the quality of the time of injection and in the event of needling.

This is in line with the theory (Hungu, 2007) where gender is the difference between women and men biologically from birth. There are more female nurses than male nurses because the workforce of nurses is less attractive to men. The likelihood of needling accidents in women is 3.5 times higher than men because based on physical endurance men are stronger than women so that it affects the results of the quality of work done so that the most NSI sufferers are women (Dopolani, 2015).

This can be made possible because based on interviews with the K3, in hospital X Bekasi district received a lot of patients, including in the inpatient room, where in the inpatient injection activities performed by nurses very much and generally nurses who work at home sick X Bekasi district at the time of the needle-punctured event in 2017-2018 were women (13 nurses) due to the high interest in becoming nurses than men, namely from 69 nurses who worked, 62 nurses who worked were women, and 7 male nurses man The likelihood of needling accidents in women is higher than in men, this is because the number of nurses working in the inpatient room is women, which is 9 times more than men and in women getting tired more tired so that women are more likely to be pricked by needles ..

To overcome the incidence of needling in the sex, management should increase the number of nurses with male sex so that there are no significant differences in number, and male nurses can alternately help when injecting so that the incidence of pricking does not recur.

2. Characteristics of the Age of Nurses Needed by a Needle in Hospital X Bekasi Regency in 2017-2018

Based on the results of secondary data obtained from the annual report of needling and needle exposure exposure for 2017-2018, obtained data from 14 nurses who have experienced the event of needling, the most respondents nurses based on age are nurses with age <30 years as many as 10 people (71.4%).

This is in line with research (Mapanawang, 2017) which states that out of 72 nurses who are pierced by needles there is a percentage of nurses with age <30 years who are more punctured by 37 respondents (51.4%) because age <30 years tends to be more not alert and unfocused when injecting and less careful and impatient so when injecting not

thorough, because emotionally do not yet have a mature emotional control so that this causes nurses with <30 years of age more needling.

This is in line with the theory (Suma'mur, 2009), which says personal characteristics including age can affect a person in a work environment where the younger the person's age will physically improve performance but his personal observer has not shown stability. In several cases it was also stated that workers with young age groups often experience accidents due to carelessness and lack of experience or working hours they have (Putri, 2017). Age <30 years tend to be less alert and unfocused and have less emotional control so that at age <30 years are more likely to cause needling.

This could be possible because based on interviews with the K3 hospital, nurses aged <30 years were recruited more because they have physical endurance and strength better than age > 30 years so that in general nurses who work in hospitals X Bekasi district the incidence of needling in 2017-2018 more nurses with age <30 years (10 nurses), so nurses who work are more likely to be less vigilant and unfocused and have less emotional control when doing work on the detection and prevention of NSI, AS WELL AS less concerned about their work, and more often work in a hurry and not be impatient so that more are punctured by needles.

To overcome the incidence of needling at age, hospital management should be able to conduct periodic health checks to see the physical condition of the nurse whether the physical function is good or not, such as eye health checks, whether myopic nurses, or other physical examinations such as vital signs that include blood pressure checks, Hemoglobin (hemoglobin) and others to optimize the health and performance of nurses to be more leverage so that the incidence of needling does not re-occur.

3. Overview of Education Characteristics of Nurses Needled by a Needle in Hospital X Bekasi Regency in 2017-2018

Based on the results of secondary data obtained from annual reports of needling and needle exposure exposure for 2017-2018, the respondents who were mostly based on education were nurses with an S1 education of 8 people (57.1).

This is in line with research (Mapanawang, 2017) which shows that in the diploma-educated case group of 14 respondents (19.7%) S1 education in the case group was 58 respondents (80.6%) in the case of needling because of S1 education lack of injection practice so nurses with S1 education are more likely to be pricked.

This is because according to Law number 38 of 2014 article 9 nursing higher education can be held by universities that have legality in accordance with statutory regulations. The intended education is in the form of universities, institutes, high schools, polytechnics or academies that provide health care facilities to support education and collaborate with nurses' organizations and professions.

Nursing higher education itself in Law no.38 of 2014 in articles 5-8 consists of:

1. Vocational education, is a diploma education and is the lowest education in nursing.
2. Academic education including undergraduate nursing, master of nursing, and doctor of nursing. Education based on Law no.38 of 2014 is any planned effort to influence other people both individuals, groups or communities so that they do what is expected by education practitioners. So that things like work accidents like needle sticking don't happen.

This can be made possible because based on the results of interviews with the K3 states that the hospital sets a standard S1 nurses for nurses who work and there is cooperation between hospital X with one of the universities where the graduates produced are with S1 nurse education, S1 education also have more competent competencies such as competence in practice and management, and undergraduate education is less capable in the practice of injecting and preventing NSI.

To overcome the incidence of needling in nurses with S1 education need to get more attention, such as seeing whether in previous S1 education the nurse often gets direct practice against patients such as hospital services or clinical practice, if S1 nurses lack direct practice in education, it is recommended so that nurses with S1 education more often attend seminars related to NSI and for hospital management to provide facilities such as seminars and socialization related to NSI prevention so nurses better understand how to inject properly and correctly so that NSI does not reoccur.

4. Characteristics of the Nurse with a Needle-Stained Nurse in Hospital X in Bekasi Regency in 2017-2018

Based on the variable length of service collected by using a checklist sheet measuring tool by looking at the annual reports of nurses who are pierced by needles and data forms of nurses who are pierced by needles in 2017-2018 it can be seen that the proportion of nurse respondents with tenure <3 years is 7 people (50%).

This is in line with research conducted by (Meilawati, 2019) about the incidence of needling wounds in nurses at Bhayangkara Brimob Hospital in 2018 stating that of the 54 nurses who were pricked with the most cases of needling were with a work period of <3 years 38 people (70.3%) because they did not know the danger points at their workplaces and were inexperienced in injecting and preventing NSI which could eventually lead to errors that could lead to work accidents punctured by needles.

This is in line with the theory (Suma'mur, 2009) which states that a person's experience to recognize hazards in the workplace will get better along with the increase in the work period (long work period) so that the old workers will be more familiar with the danger points in the workplace those who can ultimately minimize the occurrence of errors that can result in accidents. Working period is a whole lesson learned by someone from the events that are passed in his life journey. The longer the workforce works, the more experience the relevant workforce has. Conversely the shorter

the working period (new work period) the less experience gained. Work experience gives a lot of expertise and work skills, conversely limited work experience results in lower expertise and skills. New workers usually do not know deeply the ins and outs of work and safety. Classification of years of service is categorized into 2 namely:

1. Working period for new categories ≤ 3 years
2. Long Service Years > 3 years (Handoko, 2010)

This can be possible because based on interviews with the K3 the hospital states that in general nurses who are working in hospital X in Bekasi district at the time of the needling incident in 2017-2018 were nurses with a working period of <3 years (as many as 7 nurses) so nurses with tenure <3 years did not recognize the danger points at their workplaces and lacked experience in injecting and preventing NSI, which in turn can cause errors that can lead to needle sticking accidents.

To deal with the incidence of needle sticking to nurses with years of service, it is recommended that the Bekasi X hospital hold emphasis on every new employee orientation training and K3 training related to NSI prevention and exposure reporting so that no one is late or delay informing the hospital's K3 team X Bekasi regency, and also hospitals, should provide guidance, assistance and supervision of nurses by controlling and educating nurses through each head nurse in each room.

5. Overview of Characteristics of NSI Nurses Needling with Needles at X Hospital Bekasi District

The most respondents based on training are nurses who have not trained NSI, as many as 9 people (65%), and the lowest proportion of NSI training is nurses respondents who have attended NSI training, namely 5 nurses (35%).

This is in line with research (Puspitasari, 2012). The results showed that of the 60 nurses there were 22 (36.7%) nurses who had attended the training and 38 nurses (63.3%) who had not yet participated in the training of needling.

This is because training is a process where people achieve certain abilities to achieve organizational goals. Training provides employees with specific and knowable knowledge and skills that can be used in their work and can support their work (Mathis, 2002). Training is also adapted to the needs of the position and job and is given in a relatively short time to equip someone with work skills (Payaman, 2003), so that training can improve the skills and abilities of nurses in injecting and preventing NSI, and avoid the incidence of needling.

This can be made possible because based on interviews with the K3 the hospital stated that nurses who worked at hospital X Bekasi district at the time of the 2017-2018 needle-punching event had not all received NSI training (as many as 9 nurses), because NSI training was not routinely conducted and it has not been evenly done to all nurses and NSI training does not receive special attention, because there is more training for patient safety and health than nurses, and the training is not balanced so nurses who have not received NSI training are more prone to being pricked than those who have received NSI training, so nurses who have not received NSI training are more likely to be pricked by needles. (2017-2018 needles report).

To overcome the incidence of needling in nurses who have not received NSI training, hospitals should increase training related to NSI prevention every 6 months, so as to increase awareness, awareness, and responsiveness to safety to avoid the occurrence of NSI, and increase training facilities such as videos, demonstrations and current practices NSI training, so that the information received is more maximal, more often the practice of injecting and NSI training with phantom and injecting practices in an effort to train the nurses' abilities themselves and learn to reduce the incidence of needling, the training also serves to help the process of self-control and prevention NSI, as well as for management to provide a special room and add facilities to educate nurses by providing monthly schedules for NSI injection and prevention exercises and making special requirements for compulsory mandatory NSI prevention training organized by hospitals so they have good skills.

CONCLUSION

1. The sex characteristics of individual nurses in hospital X in Bekasi district in 2017-2018 with the highest proportion of sex characteristics, namely the female sex of 13 nurses (92.9%).
2. Age characteristics of individual nurses in Bekasi X hospital in 2017-2018 with the highest proportion of age characteristics that are <30 years as many as 10 nurses (71.4%).
3. Characteristics of the education of individual nurses in hospital X in Bekasi district in 2017-2018 with the proportion of characteristics of nurse education punctured by a needle obtained the highest proportion of respondents nurses with S1 education that is as many as 8 people (57.1%).

4. Characteristics of the length of service of individual nurses in Bekasi X hospital district in 2017-2018 with the proportion of the characteristics of the length of service obtained by the proportion of respondents nurses with tenure <3 years that is as many as 7 people (50%).
5. Characteristics of NSI training of individual nurses in hospital X in Bekasi district in 2017-2018 with the highest proportion of nurse respondents being NSI training as many as 9 nurses (65%).

SUGGESTION

1. Inpatient installation of hospital in Bekasi district X must pay special attention to the rest time of workers so that workers get the right time to rest so that nurses can work more optimally and be more focused.
2. It is better for nurses to be given special attention by the hospital management regarding high patient visits so that they can be followed up at that time so they can deal with situations or conditions during high patient visits.
3. Inpatient installation of hospital in Bekasi Regency X must adjust physical work capacity, mental work capacity with work done by workers and create a comfortable work environment for nurses.
4. Overall Hospital Related advice for nurses is the addition of nurse HR.
5. Related advice for management is that nurses with S1 education need to get more attention, such as seeing whether in previous S1 education the nurse often gets direct practice towards patients such as hospital services or clinical practice, if S1 nurses lack direct practice in education, It is recommended that nurses with S1 education more often practice with Phantom and learn to reduce the incidence of needling, Education also serves to help the process of self-control and prevention of NSI.
6. Suggestions for the Bekasi district X hospital to emphasize every new employee orientation training and K3 training related to NSI prevention and exposure reporting so that no one is late or postponed informing the Bekasi hospital X hospital XHS team.
7. Suggestions related to nurses with characteristics that have not been trained NSI to overcome the incidence of needling in nurses who have not trained NSI, hospitals should increase training related to prevention of NSI every 6 months, so as to increase awareness, alertness, and responsiveness to safety to avoid the occurrence of NSI .

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