

# Patient Safety Culture Overview of the Naval Academy Hospital

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The culture of patient safety developed by hospital management is the first step to make effective patient safety efforts. Hospital patient safety is a system in which hospitals will make patient care safer than before. The purpose of this paper was to describe the overview of patient safety culture at the Naval Academy Hospital thoroughly. Materials and Methods: The research was descriptive, and used a questionnaire as the data collection tool for patient safety culture, which was adapted from the Hospital Survey on Patient Safety Culture questionnaire published by The Agency for Healthcare Research (AHRQ). The data analysis performed was descriptive statistical analysis. Results: The results showed that the distribution of patient safety culture based on installation indicated that every installation in the Naval Academy Hospital had a positive patient safety culture. Installations which received a positive response above 50% were the emergency department installation, inpatient room installation, general poly, medical record, laboratory installation, environmental sanitation installation, physiotherapy installation, laundry installation, financial department, and drug warehouse. The dimension having the highest positive response was the cooperation within the unit (79.4%), while the lowest was management support (39.0%). Conclusion: Patient safety culture at Naval Academy Hospital is quite positive. It is expected that the hospital will continue to make improvements and enhance the culture of patient safety, especially the dimension in the lowest category.

**Key words:** *Overview, patient safety, patient safety culture, naval academy hospital.*

## Introduction

Public requests regarding safer care or treatment has triggered the healthcare industry to try to understand the relationship between patient safety and a hospital's performance (Brown and Wolosin, 2013). A hospital is a complex and risk-dense healthcare service place. In a hospital, there are hundreds of medicines, tests and procedures, equipment and technologies, as well as various professionals and non-professionals that will provide services for the patients for 24 hours continuously. A service which is not well-managed will cause adverse events (Depkes, 2008). Adverse events in health services can affect patients, families, the health workers involved, and those who are indirectly exposed, such as patient safety professionals (Card and Holden, 2019). Based on the research results in various countries, there is still high numbers of adverse events.

Patient safety is one of the safety aspects in hospitals that has become a recent global issue. Hospital activities can be performed if there is patient. Therefore, patient safety is the main priority to be conducted since this is related to the hospital's quality and image. In Utah and Colorado, adverse events were found to be as high as 2.9%, of which 6.6% caused death. Whereas, in New York, the number of adverse events found was 3.7%, of which 13.6% caused death. The mortality rate caused by adverse events on inpatients of the United States of America is 33.6 million per year, or about 44,000-98,000 per year (Corrigan, 2015). A WHO publication in 2004 collected hospital research numbers from various countries including the United States of America, England, Denmark, and Australia. The range of adverse events found in the research was 3.2-16.6%. Through the data, various countries have conducted research and developed patient safety systems (World Health Organisation, 2005).

Hospital patient safety is a system by which the hospital offers better care for the patient. The system involves risk evaluation, detection and monitoring of patient risk problems, incident analysis and reporting, event learning ability and follow-up, and the implementation of a solution to reduce this risk. Such a system is expected to prevent the incidence of injury caused by error during the implementation of an action or when an action that should have been implemented is ignored. Patient safety culture in a healthcare organisation includes employee safety awareness, public servants' opportunities to report on accidents, a number of recorded incidents, and a global level of patient safety in the units by staff (Mahrous, 2018).

Self-efficacy is a vital driver for patients to adopt health-enhanced behaviour. As far as nurses are concerned, those with a high degree of self-efficacy are able to convince themselves that reporting errors are a good practice in preserving and improving patient health and efficiency in a hospital. To order to track the negative effects of accidents, a nurse must also identify the issues occurring (Harsul et al, 2019). The optimum positions of all health staff, including

nurses as leaders in the service system, are essential for effective health services (Ulfah et al, 2019).

The organisation's safety culture is a product of individual and community beliefs, attitudes, expectations, competences and behavioural habits that define the commitment and style and skills of a health and safety management organisation (Sammer et al, 2010). The culture of patient safety is one of the most important factors for the prevention and correction of errors. However, in healthcare institutions dominated by the classic approach, people fear that they will be interrogated and punished due to the errors they make, and therefore, the errors are tried to be covered and ignored. However, errors need to be talked about and discussed. The main reasons should be addressed and lessons should be learnt from the errors (Profile SEE, 2017). This opinion is supported by research which shows that patient safety culture has a direct relationship with the improvement of patient safety implementation. This eventually affects the outcome of patient safety. Therefore, it is important for a hospital to know the patient safety culture which is currently developing in the hospital, so that the efforts that need to be developed to improve patient safety is known (Mcfadden et al, 2009).

One of the measurement forms to measure patient safety culture and its implementation in hospital is the implementation of patient safety culture based on Association Health Care and Research Quality (AHRQ). The AHRQ method can be measured from the perspective of hospital staff, and consists of 12 dimensions, which are: 1) expectation and action of the superior in promoting Patient Safety; 2) Organisation Learning; 3) unit cooperation in the hospital; 4) open communication; 5) feedback and communication regarding failure; 6) non-punitive response; 7) staffing; 8) management support in the effort for patient safety; 9) cooperation between units; 10) shift changes and patient movement; 11) overall perception about the patient safety; and 12) frequency of event report (Westat et al, 2016).

The Naval Academy Hospital is a hospital type C located in the Naval Academy Surabaya. This hospital was built to provide service every day to the cadets and military soldiers as well as their family. At present, the Naval Academy Hospital does not have any plenary accreditation certificate from the hospital accreditation committee, so the quality of patient safety services is also not optimal. This will also have an impact on the welfare of cadets and military soldiers as well as their family because this hospital should be able to provide maximum health services for them. Therefore, the researchers wanted to measure the patient safety culture on all hospital staffs, since the patient safety culture affects the outcome of patient safety. Measurement of safety culture which will be used in this research was the AHRQ method consisting of 12 dimensions about patient safety. In addition, the research instrument used was Hospital Survey on Patient Safety Culture (HSPSC), which was also issued by the Association Health Care and Research Quality (AHRQ).

## Methods

This research was descriptive through a quantitative approach. This research was performed in Naval Academy Hospital, Surabaya in June to July on 2019. The research sample used was all medical service staff and support of the hospital. Total sampling used with the number of respondents was 72 persons. Data was collected using an employing questionnaire instrument of the patient safety culture adapted from Hospital Survey on Patient Safety Culture questionnaire published by The Agency for Healthcare Research (AHRQ) (Westat et al, 2016). This study had received approval from the head of the hospital to be published to develop and improve the quality of hospital health services. Furthermore, the data was analysed through descriptive statistical analysis by using IBM SPSS Statistic 24. Data was then presented in the form of tables and narrative.

## Results

According to the respondents' characteristics (Table 1), it was obtained that the majority of the respondents were between 31-50 years old, which was as many as 62.5%, while the smallest age group was 50 years old, which was as many as 12.5%. The distribution of the respondents based on sex showed that most were male, with as many as 73.6%, while the rest were female, with as many as 26.4%. The distribution of respondents based on educational level showed that most subjects were of a High School level, with as many as 52.8%, while the least were those involved in a Master Program, with as many as 2.8%. The distribution of respondents based in the work unit showed that most worked in emergency room installation and general poly with many as 16.7%, while the least was at physiotherapy as many as 2.8%.

**Table 1:** Respondent Characteristics in Naval Academy Hospital

| Respondent Characteristics | n  | %    |
|----------------------------|----|------|
| Age Group (years)          |    |      |
| 1. 21-30                   | 18 | 25   |
| 2. 31-50                   | 45 | 62.5 |
| 3. >50                     | 9  | 12.5 |
| Sex                        |    |      |
| 1. Male                    | 53 | 73.6 |
| 2. Female                  | 19 | 26.4 |
| Educational Level          |    |      |
| 1. High School             | 38 | 52.8 |
| 2. Diploma III             | 14 | 19.4 |
| 3. Undergraduate Program   | 18 | 25   |
| 4. Master Program          | 2  | 2.8  |

| Work Unit                        |    |      |
|----------------------------------|----|------|
| 1. Emergency Room Installation   | 5  | 6.9  |
| 2. Inpatient Room Installation   | 12 | 16.7 |
| 3. Pharmacy Installation         | 6  | 8.3  |
| 4. General Poly                  | 12 | 16.7 |
| 5. Dental Poly                   | 7  | 9.7  |
| 6. Medical Recorded Installation | 4  | 5.6  |
| 7. Laboratory                    | 7  | 9.7  |
| 8. Environmental Sanitation      | 4  | 5.6  |
| 9. Laundry Installation          | 4  | 5.6  |
| 10. Physiotherapy Installation   | 2  | 2.8  |
| 11. Financial Department         | 4  | 5.6  |
| 12. Drug Warehouse               | 5  | 6.9  |

The research result of three-dimension frequency showed that the highest responses was the dimension of supervisor/manager's expectation, and the and safety promotion action, which showed a mean positive response of 62.1%. The cooperation learning in unit showed a mean positive response of 79.4%. and the frequency dimension of a supervisor/manager's expectation and safety promotion action showed a mean positive response of 62.1% (Table 5).

**Table 5:** Description 12 patient safety culture dimensions

| NO  | Dimensions   | Number of Positive Response (%) |
|-----|--|---------------------------------|
| 1.  | Supervisor's expectation and health promotion action | 62.1                            |
| 2.  | Organisation learning/ sustainable improvement       | 49.9                            |
| 3.  | Cooperation in Unit                                  | 79.4                            |
| 4.  | Communication Openness                               | 42.0                            |
| 5.  | Feedback and Communication about Error               | 52.7                            |
| 6.  | No-Punitive Response on Error                        | 46.0                            |
| 7.  | Staffing   | 53.0                            |
| 8.  | Management's Support on Patient Safety               | 39.0                            |
| 9.  | Cooperation between Units                            | 48.9                            |
| 10  | Shift Change and Patient Transfer                    | 55.0                            |
| 11. | Overall Perception Regarding Patient Safety          | 60.3                            |
| 12. | Report Frequency                                     | 67.1                            |
|     | Positive Response Mean                               | 54.6                            |

The installation which received the highest positive in Supervisor's Expectation and Health Promotion Action response was emergency room installation with 85.0%. The installation

which received the highest positive response in Cooperation in Unit was physiotherapy and financial department by 100% (Table 2).

**Table 2:** Distribution of Dimension Frequency of Patient Safety Culture Based on Work Unit in Naval Academy Hospital

| NO  | Installation         | Work Unit  |   |                     |                        |
|-----|----------------------|--|---|---------------------|------------------------|
|     |                      | Supervisor's Expectation and Health Promotion Action | Organisation Learning and Sustainable Improvement | Cooperation in Unit | Communication Openness |
| 1.  | Emergency Department | 85.0%  | 40.0%   | 95.0%               | 60.0%                  |
| 2.  | Inpatient Room       | 48.0%  | 52.8%   | 87.5%               | 47.2%                  |
| 3.  | Pharmacy             | 62.5%  | 27.8%   | 70.8%               | 16.0%                  |
| 4.  | General Poly         | 63.7%  | 72.3%   | 56.3%               | 50.0%                  |
| 5.  | Dental Poly          | 60.7%  | 66.7%   | 75.0%               | 9.50%                  |
| 6.  | Medical record       | 37.5%  | 66.7%   | 81.3%               | 50.0%                  |
| 7.  | Laboratory           | 53.6%  | 42.9%   | 64.3%               | 71.4%                  |
| 8.  | Sanitation           | 56.3%  | 58.3%   | 62.5%               | 33.3%                  |
| 9.  | Laundry              | 81.3%  | 25.0%   | 75.0%               | 16.7%                  |
| 10. | Physiotherapy        | 62.5%  | 50.0%   | 100%                | 33.3%                  |
| 11. | Financial Department | 68.8%  | 50.0%   | 100%                | 83.3%                  |
| 12. | Drug Warehouse       | 65.0%  | 46.7%   | 85.0%               | 33.3%                  |

The installation which received the highest positive Feedback and Communication About Error response was environmental sanitation installation with 83.3%. The installation which received the highest positive Non-Punitive Response towards Error response was general poly with 66.7%. The installation which received the highest positive staffing response was laundry installation with 87.5% and the installation which received the highest positive Management Support towards The Patient Safety response was environmental sanitation with 66.7% (Table 3). Table 4 showed that the installation which receives the highest positive response is the drug warehouse with 93.3% in report frequency, the emergency room installation with 100.0% in Shift Changes and Patient Transfer, and the medical record installation with 87.5% in Overall Perception on Patient Safety.

**Table 3:** Distribution of Dimension Frequency of Patient Safety Culture Based on Work Unit in Naval Academy Hospital

| NO  | Installation         | Work Unit                              |                                     |          |   |
|-----|----------------------|--|-------------------------------------|----------|---|
|     |                      | Feedback and Communication About Error | Non-Punitive Response towards Error | Staffing | Management Support towards The Patient Safety |
| 1.  | Emergency Department | 66.7%                                  | 53.3%                               | 35.0%    | 60.0%   |
| 2.  | Inpatient Room       | 52.8%                                  | 55.6%                               | 56.3%    | 25.0%   |
| 3.  | Pharmacy             | 33.4%                                  | 50.0%                               | 50.0%    | 33.3%   |
| 4.  | General Poly         | 55.6%                                  | 66.7%                               | 58.3%    | 33.4%   |
| 5.  | Dental Poly          | 61.9%                                  | 19.1%                               | 21.5%    | 38.1%   |
| 6.  | Medical record       | 41.7%                                  | 41.7%                               | 37.5%    | 33.3%   |
| 7.  | Laboratory           | 33.3%                                  | 57.1%                               | 64.3%    | 33.3%   |
| 8.  | Sanitation           | 83.3%                                  | 58.3%                               | 37.5%    | 66.7%   |
| 9.  | Laundry              | 58.3%                                  | 33.3%                               | 87.5%    | 58.3%   |
| 10. | Physiotherapy        | 50.0%                                  | 33.3%                               | 50.0%    | 33.3%   |
| 11. | Financial Department | 41.7%                                  | 50.0%                               | 62.5%    | 33.3%   |
| 12. | Drug Warehouse       | 53.3%                                  | 33.3%                               | 75.0%    | 20.0%   |

**Table 4:** Distribution of Dimension Frequency of Patient Safety Culture Based on Work Unit in Naval Academy Hospital

| NO  | Installation         | Work Unit                 |                                    |                                      |                  |
|-----|----------------------|---------------------------|------------------------------------|--------------------------------------|------------------|
|     |                      | Cooperation Between Units | Shift Changes and Patient Transfer | Overall Perception on Patient Safety | Report Frequency |
| 1.  | Emergency Department | 50.0%                     | 100.0%                             | 65.0%                                | 33.3%            |
| 2.  | Inpatient Room       | 50.1%                     | 31.2%                              | 62.5%                                | 52.8%            |
| 3.  | Pharmacy             | 45.9%                     | 75.0%                              | 50.0%                                | 55.5%            |
| 4.  | General Poly         | 25.0%                     | 58.4%                              | 58.3%                                | 38.9%            |
| 5.  | Dental Poly          | 50.0%                     | 64.3%                              | 50.0%                                | 57.1%            |
| 6.  | Medical record       | 56.3%                     | 56.3%                              | 87.5%                                | 91.7%            |
| 7.  | Laboratory           | 64.3%                     | 53.6%                              | 75.0%                                | 90.5%            |
| 8.  | Sanitation           | 37.5%                     | 31.3%                              | 56.3%                                | 41.7%            |
| 9.  | Laundry              | 50.0%                     | 37.5%                              | 37.5%                                | 75.0%            |
| 10. | Physiotherapy        | 50.0%                     | 50.0%                              | 37.5%                                | 83.3%            |

|     |                      |       |       |       |       |
|-----|----------------------|-------|-------|-------|-------|
| 11. | Financial Department | 62.5% | 37.5% | 68.8% | 91.7% |
| 12. | Drug Warehouse       | 40.0% | 65.0% | 75.0% | 93.3% |

The distribution of patient safety culture based on installation showed that every installation in the Naval Academy Hospital had a positive patient safety culture. Installations which received a positive response above 50% were emergency department installation, inpatient room installation, general poly, medical record, laboratory installation, environmental sanitation installation, physiotherapy installation, laundry installation, financial department, and drug warehouse. In addition, the installation which had the highest positive response was the financial department installation with 62.5%, while the installation which received the lowest positive response was pharmacy installation with 47.5% (Table 6).

**Table 6:** Distribution of Dimension Frequency of Patient Safety Culture Based on Installation in Naval Academy Hospital

| NO  | Installation         | Number of Positive Response (%) |
|-----|----------------------|---------------------------------|
| 1.  | Emergency Department | 61,9                            |
| 2.  | Inpatient Room       | 51,8                            |
| 3.  | Pharmacy             | 47,5                            |
| 4.  | General Poly         | 53,1                            |
| 5.  | Dental Poly          | 47,8                            |
| 6.  | Medical record       | 56,8                            |
| 7.  | Laboratory           | 58,6                            |
| 8.  | Sanitation           | 51,9                            |
| 9.  | Laundry              | 53,0                            |
| 10  | Physiotherapy        | 52,8                            |
| 11. | Financial Department | 62,5                            |
| 12. | Drug Warehouse       | 57,1                            |

## Discussion

The positive response of patient safety culture based on installation shows that every installation in the Academy Hospital which belongs to Hospital type C implements its hospitality function quite well, although it does not have plenary accreditation certificate from the Hospital Accreditation Committee yet. The culture of patient safety in an organisation is a product of individuals and groups that value the attitudes, perceptions, competencies, and behaviours that are committed to health management regarding patient safety (Westat et al, 2016) Patient safety culture is the main foundation for healthcare that emphasises patient safety, so the quality of hospital services is good according to patients and high society.

The expectations of supervisor/manager and patient safety promotion actions describe the action of the supervisor/manager in promoting the safety of the patients, including rewarding the staff and hearing advice in facing patient safety issues. Research at hospitals in Australia report that supportive leadership has a positive impact on safety motivation, which then increases the level of safety. Good leadership in an organisation can direct members of that organisation to achieve organisational objectives, including in the case of patient safety (Fleming and Wentzell, 2008). A significant first step to improving patient safety is to acknowledge and recognise an organisation's safety culture. The development of a safety culture within health organisations is an important first strategy to enhance all aspects of the quality of health care (Habib et al, 2018).

Organisational learning and continuous improvement describe hospital officers as willing to learn and improve patient safety efforts. Based on the results of research at the Naval Academy Hospital, the organisational learning dimension and continuous improvement have a positive response. In the safety culture, there are also cultures to report mistakes or incidents of injury. The report of the incident is used for learning in the organisation in improving the service system (Sammer et al, 2010). Continuous improvement is one of the real forms that is performed as a support in implementing the safety culture of the patient in the hospital. Staff development programs through training and education are effective programs to improve productivity for nurses (Tristantia, 2018). Education and training should, at least, provide a basic understanding of safety science, what it means to be a highly effective company, the importance of a safety evaluation culture and a method of enhancing results, including rapid cycle change testing. (Sammer et al, 2010).

Cooperation in the unit describes the composition of the unit to support, cooperate, and respect, each other. Based on the research results at the Naval Academy Hospital, it showed that the learning dimension of cooperation in the unit had a positive response. Teamwork is needed among medical teams to improve patient safety through the reduction of mistakes caused by teamwork between medical officers (Baker et al, n.d).

Open communication involves the courage of members and the leadership in expressing opinions and not feeling depressed. Based on the research results at the Naval Academy Hospital, it showed that the dimensions of communication openness had a positive response. Briefing is one way to improve communication to share information about potential patient safety occurring in day-to-day activities. All healthcare staff surveyed thought that communication problems inside and without practice were a danger to patient safety and were correlated with more incidents (Habib et al, 2018).

Nurses and patients should be treated fairly when an incident occurs. In the event of an incident, looking for individual mistakes should not be a focus. Instead, it should be an opportunity to

learn more about the system that resulted in the error. Higher patient safety culture has shown to be related to better patient outcomes. Quality services in hospitals mean multidisciplinary care for the patient at a minimum risk (Hiromi et al, 2018). With the growing understanding of the effect of a safety culture on patient safety and care quality outcomes, a wide range of patient safety, care results, and their relationship to a safety culture in hospitals are important to be examined (Lee et al, 2019).

Staffing indicating the extent to which the availability of officers by the needs of hospitals and management is carried out effectively (Lee et al, 2019). One of the key elements of the organisation is HR. Human resources is one of the key factors that establish and understand patient health. Human resources must be seen as a development tool (Nurlaila et al, 2019). The cooperation between the units shows the extent to which the solidarity between the units to coordinate and cooperate properly in providing services in the hospital. Teams and teamwork are important components in healthcare, and successful organisations (hospitals) increases the dependency on teamwork in the overall medical service provided to patients (Mccomb et al, 2015).

Shifts changing and patient transfers show the extent to which a smooth shift of personnel work shifts, and patient displacement can occur. The research results at the Naval Academy Hospital showed that the dimension of shift and displacement of patients had a positive response. Factors that inhibit the hands-off and transition are errors in the delivery of patient care information during the transfer of patients (Hiromi, et al, 2018).

The overall perception of patient safety demonstrates the extent to which the officer's knowledge and understanding of the patient safety is applicable in the hospital. The research results at the Naval Academy Hospital showed that the overall dimension of perception of patient safety had a positive response. Culture also establishes the perception of doctors and staff on normal behaviour related to the safety of patients in their working areas. Therefore, culture affects a person's motivation to engage in safe behaviour and the extent to which this motivation is applied in daily practice (Review AS, 2013).

A positive safety culture will improve patient safety performance. Safety culture is the result of values, attitudes, perception, competence, and habit patterns that give an overview of the commitment, style, and reliability of the management of an organisation. If, on the one hand, there is a recognition of an error and the importance of communicating, there is, on the other hand, an omission of it due to the absence of communication. An organisation, which has a strong safety culture, is characterised by trust-based contact, an exchange of security expectations and preventive measures. (Galvão, et al, 2018)



Patient safety management assistance describes the support for patient safety hospital management in the event of error reports. The management factor and the organisation itself has been known as the latent cause of an incident and integration in the concept of cultural safety. Building awareness of the value of patient safety and leading and supporting staff in the application of patient safety are important parts of creating a patient safety culture (Indonesia PR, 2011). The management's safety commitment is demonstrated through written policies, effective communication, and exemplary practices (Rn and Rn, 2004).

A patient safety culture consisting of multiple dimensions cannot stand alone as the dimensions affect each other. The application of patient safety culture is said to be successful when all elements in the hospital apply the safety culture of the patient in their daily work. The organisation or company will improve the employees' performance by increasing the employees' job satisfaction through organisational culture (Maharani and Roshandi, 2004).

A limitation in this research is the scope of the hospital. It is a military hospital where all personnel are health military members who have the obligations of not only a healthcare service in the hospital but also have the obligation to implement health support for every cadet and soldier in the Naval Academy. The time owned by the hospital members as the research respondents is limited since they are pressed by their main duty as a soldier working in a military environment. The data would be maximal if the researchers also conducted observations and interviews with the staff regarding the patient safety culture and its implementation, so the data obtained would be more accurate and in depth.

## **Conclusion**

The research result shows that the Naval Academy Hospital has a positive response in patient safety culture. The hospital should conduct a routine patient safety culture assessment of staff and improve patient safety culture. Those improvements can be performed by providing intensive training regarding patient safety to all staff, evaluating and following up the patient safety indicator in every installation sustainably, socialising matters related to patient safety in every installation, and forming report systems (written and oral) of events related to patient safety. This would create an environment which helps the staff to report errors spontaneously, and in developing a non-punitive culture that enables open communication.

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