Conference Paper

Analysis of the Patient Safety Culture in Awal Bros Batam Hospital, Year 2016

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Abstract

A good patient safety culture is needed as the complexity of hospital services and procedures increase, thus prone to accidental errors. This study aims to find out the cultural status of patient safety in Awal Bros Batam Hospital in the year 2016. The authors used the concept of the patient safety culture of the Agency for Healthcare Research and Quality (AHRQ, 2004) and Carthey and Clarke (2010), and for the improvement of the weak dimensions, the system reliability concept of Marx D. (2010) was used. The study design was sequential explanatory, with Indonesian translation from the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire from AHRQ followed by FGD to formulate the improvement effort of the weak dimension. Patient safety culture status categorized into moderate culture, average of positive perceptions were 70.82%. The greatest strengths were in organizational learning and continuous improvement, feedback and communication about patient safety, and communication openness. Weaknesses were primarily in staffing, non-punitive responses to errors, handover and transitions must be fixed immediately. Improvement suggestions by reducing non-core job assignments, employee retention programs, hotline service internal, leader lead tracer, and investigator training.

Keywords: hospital of patient safety culture, patient safety, safety culture

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1. Introduction

The hospital's function in health services have been more complex nowadays, with many difficult procedures has used, the possibility of accidental mistakes related to Patient Safety (PS) is increasing [1]. PS has been echoed long ago with *Primum, Non No Cere* or First Do No Harm by Hippocrates in 460–335 BC [2]. *To Err Is Human: Building A Safer Health System* dari *The Quality of Health Care in America Committee of Institute of Medicine* [3]. PS Program, Nine Solutions of PS from WHO [4]. Several policies in Indonesia, such as The National Guideline of Patient Safety manage the patient care

system to be more secure, prevent injury due to adverse events [5]; State Law of the Republic of Indonesia Number 44 Year 2009 concerning in Article 43 Verse 1, Decree of the Ministry of Health of the Republic of Indonesia No. 1691/MENKES/PER/VIII/2011 concerning in Hospital PS, implementation can be found in the form of PS Standards, Seven Steps to Hospital PS, and the Hospital PS Goals, will be assessed in hospital accreditation [6]. Quality and Patient Safety (QPS) in Awal Bros Batam Hospital has started its programs since 2009 [7]. In 2015 and 2016, the total incidents decreased from 150 to 133 cases, the number of Adverse Events were decrease, the number of Near Misses were increase and these were a good sign, no Sentinel Event during 2016. [8, 9] The most problems defined in the root cause analysis were wrong identification and the lack in hands-off system procedure, validated in *Leader Lead Tracer.* PS Culture seems to have started in Awal Bros Batam Hospital, but not yet run as expected, PS incidents still happened [10].

This study aims are: (1) Knowing the PS culture status of Awal Bros Batam Hospital year 2016; (2) Making efforts and interventions to increase staff awareness of PS as well as evaluation of cultural impacts, cultural change tendencies of PS from time to time; **(**3) Knowing about Openness, Just, Reporting, Learning, Information Cultures in the PS context in Awal Bros Batam Hospital; (4) Identifying the strong and weak dimensions in the PS context, as well as looking for ways where the PS culture needs to be improved.

This study combined the PS Cultural Theory from Carthey and Clarke [11] with the Hospital Patient Safety Culture Survey from AHRQ [12] consists of 12 dimensions that have been translated by Puspitasari M. [13], conducted validity and reliability test, to assess the culture of patient safety as follows:

1. **Openness culture** consists of Communication openness; Teamwork within unit; Teamwork across units; Overall perception of PS; Management support for PS dimensions;

2. **Just culture** consists of Non-punitive response for errors; Staffing dimensions;

3. **Reporting culture** consists of Frequency of incident reports dimension; Number of events reported*;

4. **Learning culture** consists of Organizational learning continuous improvement; Supervisor/manager expectations and actions promoting PS dimensions; Patient safety grade*;

5. **Information culture** consists of Feedback and communication about error; Hands-off and transition dimensions.

The update in this research with the use of Marx D. concept (2007) as a tool to find solutions to improve the weak patient safety culture in Awal Bros Batam Hospital by making the system more reliable, specifically related to safety culture, system performance affecting factors which must be considered, such as: Human factors to reduce errors; Barrier to prevent failure; Ability to catch failure and make improvements before it becomes critical; Ability to minimize the effects of failure. The obligation of the organization in avoiding the justification of the causes of risk and harm, generating expected outcomes, and doing the procedures correctly. Organizational and individual values consist of security, financing, effectiveness, equality, self-esteem, etc. With the balance of those factors, a good safety culture could be delivered in the Awal Bros Batam Hospital in a more systematic and structured [14].

2. Methods

The study was conducted in Awal Bros Batam Hospital with the initial study population was full time staff who's joined more than a year. From the total staff of 654 persons, 453 persons has defined in the inclusion criteria, according to the AHRQ survey criteria for hospitals with less than 500 staff, all should be taken as research respondents.

The sequential explanatory design of study, quantitative analysis done on primary data result of Hospital PS Cultural Survey from AHRQ [15] adapted from the research of Puspitasari M. [13], modified in the item of working areas and professions, adjusted regulations in Indonesia, grouping by PS Culture from Carthey and Clarke [16] between November and December 2016 [17]. The analysis delivered an overview of PS cultural status in Awal Bros Batam. Then the Focus Group Discussion with the board of directors, unit coordinator, person in charge of professional quality, and QPS Committee had done to formulate efforts to improve the weak dimension in PS context with Marx D system reliability tools [14] in April 2017.

There are two types of respondent perceptions, which are positive ('strongly agree', 'agree', 'always', 'often') and negative ('strongly disagree', 'disagree', 'never', 'rare'). **The calculation used the AHRQ formula**: the number of positive perception in one part/dimension divided by total number of responses (positive, neutral, negative) in each aspect. **Meanings:** > 75%, good culture, needs to be maintained; 50–75%, moderate culture, needs to be improved; < 50%, poor culture, it is necessary to improve the system for the assessed areas/ aspects.

3. Results

From the 453 questionnaires, there were 259 qualified (57.1%) with the following characteristics: 20–63 years old, mostly 24 years old, female 188 persons (72.6%). Mostly from the Critical Unit (Emergency Unit, Operating Theatre, Intensive Care Unit, Intensive Cardiac Care Unit, Pediatric Intensive Care Unit, High Risk Services, for healthy, sick neonates and Neonatal Intensive Care Unit) were 62 persons (24%); Functional nurses were 109 persons (42%), Radiographers 4 persons (1%); Length of work in hospital and unit mostly were in 1–5 years; Length of work per week was in 40–59 hours (83%), in 60–79 hours per week was 10.4%; 205 staff (79.2%) contacted with patients. Awal Bros Batam Hospital safety culture findings [16] are described in Table 1. As for positive perceptions percentage of safety culture description in Awal Bros Batam Hospital Year 2016 [15, 16] are displayed in graphic 1.

Table 1: Awal Bros Batam Hospital Safety Culture Findings (Carthey and Clarke), Year 2016.

No	Culture type	Variable	% Positive Perception of Each Variable	% Positive Perception of Each Culture
1	Openness culture	Communication openness	83,53%	78,16%
		Teamwork within unit	79,45%	
		Teamwork across unit	69,85%	
		Overall perception of patient safety	76,08%	
		Management support for patient safety	81,87%	
2	Just culture	Staffing	34,73%	41,57%
		Non punitive response of errors	48,40%	
3	Reporting culture	Frequency of incident reports	77,20%	78,55%
		Number of events reported*	79,90%	
4	Learning culture	Organizational continuous learning improvement	92,27%	73,73%
		Supervisor/Managers expectations and actions promoting paient safety	66,43%	
		Patient safety grade*	62,50%	
5	Information culture	Feedback and communication about errors	85,30%	69,64%
		Handsoff and transition	53,98%	

Note: * is additional questions in AHRQ HSOPSC (2011) from Sections E and G, the other variables consist 12 PS culture dimension from the same survey.

The classification of the cultural dimension of PS from 12 dimensions and two additional questions in HSOPSC in Awal Bros Batam Hospital according to AHRQ guidance [15] are described in Table 2.

The strongest dimensions were organizational learning and continuous improvement, feedback and communication about patient safety, communication openness. The weakest dimensions were staffing, non-punitive responses to errors, hands-off and transitions, these are the same with AHRQ's finding in almost all hospitals around the world [18]. The main problem was in unit-level dimensions.

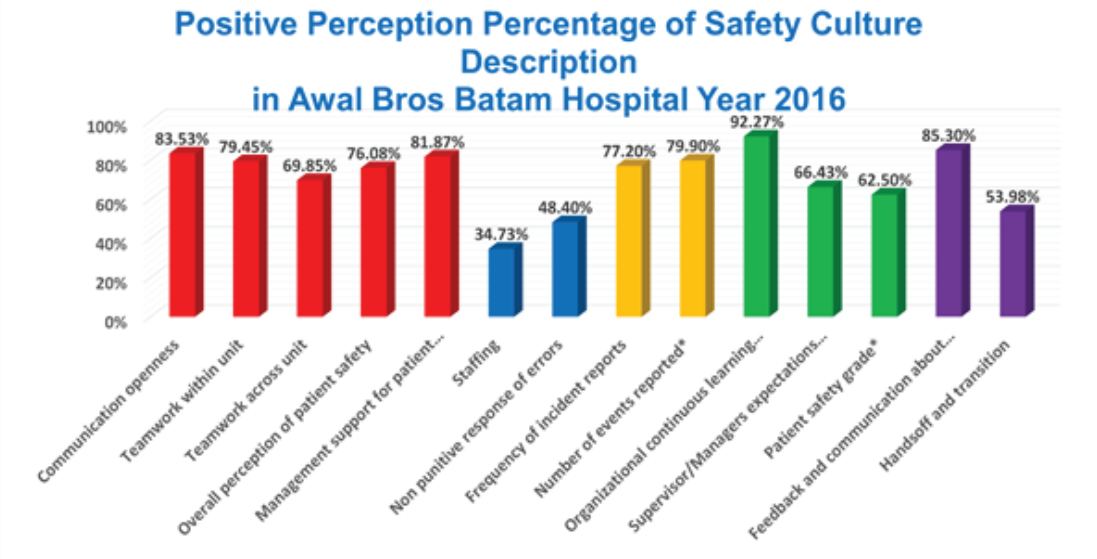

Figure 1: Positive Perceptions Percentage of Safety Culture Description in Awal Bros Batam Hospital, Year 2016 (AHRQ, Carthey and Clarke).

Table 2: Patient Safety Culture Survey Result according to dimension levels in Awal Bros Batam Hospital, Year 2016.

No	Patient Safety Culture	Dimension	% Positive Perception	The Average Value
1	Unit Level	Communication openness	83,53%	70,02%
		Feedback and communication about errors	85,30%	
		Non punitive response of errors	48,40%	
		Organizational continuous learning improvement	92,27%	
		Staffing	34,73%	
		Supervisor/Managers expectations and actions promoting patient safety	66,43%	
		Teamwork within unit	79,45%	
2	Hospital Level	Management support for patient safety	81,87%	68,57%
		Handsoff and transition	53,98%	
		Teamwork across units	69,85%	
3	Outcome	Frequency of incident reports	77,20%	73,92%
		Overall perception of patient safety	76,08%	
		Number of events reported within 12 months*	79,90%	
		Patient safety grade*	62,50%	

Note: * is additional questions in AHRQ HSOPSC (2011) from Sections E and G, the other variables consist 12 PS culture dimension from the same survey.

4. Discussion

The results of the FGD with Marx D's system reliability tools, there were some problems should be resolved immediately:

1. Staffing: (1) Turn over [11]; (2) The nurses' non-core job assignments; (3) It needs re-manpower analysis continuously related to the number of services, working hours, suitability of staff competency [19, 20];

2. Non-punitive responses to errors: (1) Staff understanding of patient safety incidents and when to be reported should be reevaluated; (2) Investigator communication ways should be improved with the avoiding subjects of blaming, shamming, naming [21], (3) The flow of incident reporting need to be simplified; (4) The confidentiality of the reporter must be maintained;
3. Teamwork within units: (1) Staff need to be motivated and valued to be more open, if there are complaints between units should be resolved immediately; (2) The understanding of patient safety culture and effective communication need to be improved; (3) Procedures for requesting assistance between units have not been consistently implemented. With improvement of the cooperation between units hopefully the organization can increase handover and transition dimension;
4. The Patient Quality and Safety Committee has not consistently submitted feedback on evaluation results yet;
5. Staff understanding of the organizational goals and challenges, how their shared responsibility to achieve them, needs to be improved [22];
6. The staff has not yet optimally involved in making, reviewing the vision and mission, and the quality and patient safety program.

5. Conclusion

The hospital patient safety cultural status was in the moderate cultural category with a score of 70.82% (average positive perceptions 50–75%) with a strong culture of openness and information, weaknesses in the culture of justice and information. Recommendation improvements by reducing non-core job assignments, employee retention programs, hotline service internal, leader lead tracer, and investigator training.

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