



## Analysis of Patient Safety Culture among Healthcare Workers at Community Health Centers in Bandar Lampung, Indonesia

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**ABSTRACT:** This study aims to analyze the culture of patient safety among healthcare workers at Way Halim II Inpatient community health center, Satelit Inpatient community health center, and Pasar Ambon community health center in Bandar Lampung, Indonesia, in 2025. This cross-sectional survey used quantitative data that were collected through questionnaires distributed to all 200 healthcare workers using total sampling and analyzed with SPSS software. The research looks at 12 aspects of patient safety culture, such as how openly information is shared, how feedback and communication about mistakes happen, how often safety incidents are reported, how handoffs and transitions are managed, the support from management, responses that don't punish mistakes, learning within the organization, views on patient safety, staffing levels, actions to promote safety, cooperation between different units, and cooperation within the same unit. The findings indicate that, overall, patient safety culture in the three community health centers is relatively good, particularly in staff support, cross-unit collaboration, and leadership openness. However, challenges remain, especially regarding low reporting rates for non-severe incidents, suboptimal non-punitive environments, and uneven information completeness during handoffs. Promoting inclusive leadership, strengthening teamwork, and fostering open communication are critical for enhancing patient safety practices. This study provides recommendations for policy development, capacity building, and future research directions to foster a sustainable, safety-oriented organizational culture in primary healthcare settings.

**KEYWORDS:** Community health center, Healthcare worker, Patient safety culture, Indonesia.

### INTRODUCTION

Patient safety in community health center services is very important. This is because most medical interactions occur at the primary care level. Although incidents in primary care are usually not as severe as in hospitals, the high frequency of patient contact keeps the risk significant (Cihangir et al., 2013). Therefore, building a culture of patient safety is key to reducing mortality rates due to poor service. In low- and middle-income countries, this issue even triggers 5.7–8.4 million deaths each year (Camacho-Rodríguez et al., 2022). In Indonesia, similar challenges arise in community health centers because patient safety incidents often occur but are reported minimally or even not at all. The contributing factors include fear of sanctions, lack of understanding of reporting procedures, an organizational culture that is not yet supportive, and minimal feedback and incentives (Tirzaningrum et al., 2022). Data from the Bandar Lampung District Health Office recorded two incidents in 2023 at the Way Halim II community health center, one case at the Pasar Ambon community health center, and one case at the Satelit community health center in early 2024, whereas there were no reports at all the previous year.

The WHO Global Patient Safety Action Plan 2021–2030 emphasizes the importance of strengthening values, norms, and reporting processes to create a safe service environment. A study in Beijing showed that the knowledge of primary care officers about patient safety is still low (17.2%) and 41.2% of patients complained about the services. At RSUD dr Rasidin Padang, the main obstacles are related to staff behavior and lack of management support (Mandriani, Hardisman, and Yetti, 2019). The primary health service facilities responsible for providing health efforts, both promotive, preventive, curative, and rehabilitative in a work area (Regulation of the Minister of Health of the Republic of Indonesia No. 43, 2019).



High patient safety incidents are also found in primary healthcare services, where patient safety is sometimes neglected in primary care centers (Lousada et al., 2020). The research results are expected to assist the heads of community health centers and patient safety teams in formulating more precise policies, providing performance evaluations for healthcare workers, offering recommendations to the Health Ministry to reduce incident rates, and adding to the scientific literature on the implementation of patient safety in primary care services. Thus, this research will provide a comprehensive overview of the current conditions and strategic steps to improve patient safety at the community health center setting. This study aims to analyze the culture of patient safety among healthcare workers at community health center in Bandar Lampung, Indonesia.

## METHODS

This study uses a descriptive method with a quantitative approach. Quantitative data began with a cross-sectional design using the Survey on Patient Safety Culture (SOPSC) questionnaire, filled out by 200 healthcare workers at three community health centers in Bandar Lampung, Indonesia, using total sampling technique, from February until March 2025. Inclusion criteria include healthcare workers with  $\geq 1$  year of experience and direct involvement in patient care, while exclusion criteria encompass those on leave, pursuing further studies, or undergoing training for  $\geq 1$  month.

Quantitative data were collected using an instrument in the form of the Survey on Patient Safety Culture (SOPSC) questionnaire from the Agency for Healthcare Research and Quality (AHRQ) in 2016, which consists of 12 dimensions of patient safety culture with a total of 42 question items. The answer format uses a Likert scale ranging from the lowest score of 1=Strongly Disagree/Never, 2=Disagree/Rarely, 3=Agree/Often, and 4=Strongly Agree/Always. Patient safety culture is then categorized into Excellent (85%-100%), Very Good (70%-84%), Good (55%-69%), Fair (40%-54%), and Poor (0-39%). The SOPSC instrument has been tested for validity (Pearson) and reliability (Alpha  $> 0.6$ ) in previous research. Research ethics include informant consent, confidentiality, and ethical committee approval from the Health Research Ethics Committee of the Faculty of Medicine, University of Lampung, with the number 874/UN26.18/PP.05.02.00/2025. Descriptive analysis is used for data analysis in this study.

## RESULTS

There are 200 participants in this study. Table 1 presents the frequency distribution of respondents based on the location of the community health center, age range, length of service, and highest level of education. In terms of location, the distribution of respondents is quite even, with the largest proportion coming from the Way Halim II community health center (37.5%), followed by the Satelit community health center (35.0%), and the Pasar Ambon community health center (27.5%). This reflects a relatively balanced representation among the healthcare service locations that are the subject of the study.

**Table 1. Descriptive analysis (n=200)**

Variables	Category	n	Percentage (%)
Community health center	Pasar Ambon	55	27.5
	Satelit	70	35.0
	Way Halim II	75	37.5
Age (years)	$\leq 25$	21	10.5
	26–30	37	18.5
	31–35	50	25.0
	36–40	33	16.5
	41–45	25	12.5
	46–50	22	11.0
	$> 50$	12	6.0



Variables	Category	n	Percentage (%)
Work tenure (years)	≤ 5	58	29.0
	6–10	50	25.0
	11–15	32	16.0
	16–20	24	12.0
	21–30	21	10.5
	> 30	15	7.5
Education	Diploma I	13	6.5
	Diploma III	66	33.0
	Bachelor/Diploma IV	107	53.5
	Master degree	14	7.0

The age distribution of respondents shows that the majority of healthcare workers are in the productive age group, with the highest concentration in the 31–35 years range (25.0%) and 26–30 years range (18.5%). Only a small portion are over 50 years old (6.0%), indicating that the workforce at the community health center is dominated by the younger and middle-aged generations. A similar pattern is also observed in terms of length of service, where the group with ≤ 5 years of service comprises 29.0% of the total respondents, followed by the 6–10 years group at 25.0%. This indicates that the majority of respondents are healthcare workers with relatively new to mid-level work experience.

In terms of education level, the majority of respondents have completed higher education, specifically a bachelor's degree/diploma IV (53.5%), while 33.0% are Diploma III graduates. Only a small portion have a master degree educational background (7%), and Diploma I graduates (6.5%). These findings reflect that healthcare workers at community health centers generally have an adequate educational background in accordance with health profession standards. Thus, this demographic profile provides an important initial overview for understanding the characteristics of human resources in the context of primary healthcare services in the research area. The results of the quantitative research on patient safety culture at the community health center in Bandar Lampung show varying achievements across 12 dimensions. Overall, the average positive response reached 60.89%, higher than the Asian average (53.5%) but still below the AHRQ standard (65%). Some indicators such as Unit Collaboration (94.5%) and Organizational Learning (93.0%) reached the Excellent category, while Hand Off & Transition (16.2%) and No Blame Response (34.5%) fell into the Poor category. This data reveals specific strengths and weaknesses that need to be addressed to improve service quality.

**Table 2. Patient Safety Dimensions**

No.	Dimensions	Total percentage (%)	Category
1	Information Transparency	65.3	Good
2	Feedback	95.2	Excellent
3	Reported Incident Frequency	42.3	Fair
4	Hand Off & Transition	16.2	Poor
5	Management Support	80.8	Very Good
6	Non-Punitive Response	34.5	Poor
7	Organizational Learning	93.0	Excellent
8	Overall Perception	62.3	Good
9	Staff Organization	37.3	Fair

No.	Dimensions	Total percentage (%)	Category
10	Promotive Action	46.3	Fair
11	Inter-Unit Cooperation	63.0	Fair
12	Collaboration Within the Unit	94.5	Excellent
<b>Overall</b>		<b>60.89</b>	<b>Good</b>

Overall, the research results indicate that the patient safety culture at the community health center in Bandar Lampung has made significant progress in aspects of internal collaboration, organizational learning, and management support. However, the main challenges still lie in handoff & transition, non-punitive response, and incident reporting that have not yet reached optimal levels. These results serve as a strategic foundation for designing a holistic patient safety improvement program, prioritizing critical dimensions that have not yet met national or global standards.

## DISCUSSION

This study reveals the complexity of the patient safety culture at the community health centers in Bandar Lampung, Indonesia, through the measurement of 12 dimensions, with an average positive response rate of 60.59%. If compared, this ratio is higher than the Asian average of 53.5%, but it still does not meet the standard set by the Agency for Healthcare Research and Quality (AHRQ) of 65%. This condition indicates a gap between local practices and global standards, where quantitative data show varied achievement patterns, with some dimensions demonstrating excellent performance while others require immediate intervention. Thus, this research emphasizes the importance of formulating targeted intervention strategies to bridge the identified gaps. Information Openness (65.1%) indicates that inter-team communication is relatively smooth, thanks to the support of digital technologies such as WhatsApp and Electronic Record Management (ERM). However, there are psychological and structural barriers, particularly related to the low courage of staff to report things considered "unusual" (Woodhead et al., 2022). Therefore, it is necessary to provide anonymous reporting channels and conduct assertive communication training to enhance transparency. With this step, it is hoped that a culture of openness can be realized more optimally.

Feedback occupies the highest position with a score of 95.3%, indicating a level of transparency in conveying changes and acknowledging mistakes. However, the feedback was more focused on technical aspects, while forms of emotional appreciation—such as meaningful recognition—were still lacking. For example, the Satellite Community Health Center has implemented a team-based approach for rapid response, but the lack of consistency in documentation increases the potential for errors (Giardina et al., 2022). From here, it is important to strengthen emotional feedback to enhance team motivation and cohesion. On the other hand, the Incident Reporting Frequency only reached 41.4%, indicating a reactive reporting culture and fear of stigma, especially for minor incidents (near misses). Therefore, educating about the importance of near-miss reporting (Hamed and Konstantinidis, 2022) and simplifying the application-based reporting process (Upadhyay and Hu, 2022) are strategic steps to encourage staff participation. Thus, improving the reporting of minor incidents can contribute to reducing long-term safety risks. As for Hand Off & Transition, it received the lowest score of 20.2%, indicating a systemic failure in maintaining the continuity of patient information during task handovers. Although ERM has been implemented, the absence of standardized communication protocols—such as SBAR or I-PASS—and the lack of training are the main causes (Chandrasekaran, Sankaranarayanan, and Pendergrass, 2021). Therefore, standardizing information transition protocols needs to be established as a foundation to prevent patient data loss.

Management Support recorded a score of 81.0%, which reflects the leadership's commitment to creating a safe work environment. However, when examined alongside the Patient Safety Attention score (52.7%), there is a significant gap indicating inconsistent implementation. To address this, periodic internal audits and performance assessments based on safety indicators are recommended (Rouhana and Van Caillie, 2025). Thus, the synergy between management commitment and performance indicators can be better established. On the other hand, the Non-Blame Response, which only reached 34.1%, reveals that the organizational culture is still not fully inclusive. Concerns about personal impact and uncertainty regarding reporting consequences hinder transparency. Therefore, the implementation of a no-blame culture policy and system-based incident analysis becomes an important step in turning mistakes into learning opportunities (van Marum, Verhoeven, and de Rooy, 2022). With this cultural transformation, it is expected that staff participation in reporting will increase.



Next, Organizational Learning achieved a high score of 93.0%, indicating that every incident was followed up through evaluation and revision of procedures. However, the response tends to be reactive; therefore, a proactive approach in systematic risk analysis needs to be integrated to prevent potential issues before they occur (Hegde et al., 2023). This process will strengthen preventive strategies and encourage sustainable innovation. Overall Perception of Patient Safety scored 58.9%, with significant variation among community health centers. The main determining factors include the availability of facilities and workload. In some locations, infrastructure limitations—such as the lack of wheelchairs for the elderly—decrease the perception of safety, whereas community health centers with adequate resources show a more positive perception. Therefore, efforts to improve infrastructure and workload management are key to enhancing the perception and realization of patient safety.

In the Staff Scheduling dimension, a score of 48.0% indicates challenges in the uneven distribution of tasks on busy days. To address this, stress management training (White, Meier, and Swint, 2021) and staff rotation based on workload analysis (Youn, Geismar, and Pinedo, 2022) can enhance efficiency and emotional stability of the officers. Thus, the implementation of appropriate rotation and training will support an even distribution of workload and improve service quality. The Promotive Actions scored 46.6%, indicating a reliance on socialization and appreciation from superiors. However, Crisis Leadership only scored 35.5%, reflecting the weak preparedness of leaders during emergencies. Therefore, crisis management training and inclusive evaluation (Jankelová et al., 2021) are essential to strengthen leadership capacity. Improving the quality of safety promotion and crisis leadership will comprehensively strengthen the organization's resilience.

Finally, the two dimensions related to teamwork show a striking contrast. Inter-Unit Cooperation only scored 51.5% due to poor coordination and uneven workload, while Intra-Unit Cooperation achieved the highest score of 95.6%, reflecting strong support and respect among staff within a unit (Isangula et al., 2022). This optimal synergy demonstrates the importance of collaboration in enhancing patient safety.

## CONCLUSION

Overall, this study emphasizes that although some dimensions show high performance, there are still critical areas that require immediate attention. Therefore, it is recommended that community health centers implement standardized transition protocols, strengthen a blame-free reporting culture, and intensify communication and crisis management training. With these measures, it is hoped that the gap between local practices and global standards can be bridged, making the patient safety culture in community health centers more resilient and sustainable.

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