Factors contributing to under-reporting of patient safety incidents in Indonesia: leaders’ perspectives [version 2; peer review: 1 approved, 1 approved with reservations]

Inge Dhamanti1-3, Sandra Leggat3, Simon Barraclough3, Taufik Rachman4

1Department of Health Policy and Administration, Faculty of Public Health Universitas Airlangga, Surabaya, East Java, 60111, Indonesia
2Center for Patient Safety Research, Universitas Airlangga, Surabaya, East Java, 60111, Indonesia
3School of Psychology and Public Health, La Trobe University, Bundoora, VIC, 3083, Australia
4Department of Criminal Law, Faculty of Law, Universitas Airlangga, Surabaya, East Java, 60286, Indonesia

Abstract

Background: Understanding the causes of patient safety incidents is essential for improving patient safety; therefore, reporting and analysis of these incidents is a key imperative. Despite its implementation more than 15 years ago, the institutionalization of incident reporting in Indonesian hospitals is far from satisfactory. The aim of this study was to analyze the factors responsible for under-reporting of patient safety incidents in Indonesian public hospitals from the perspectives of leaders of hospitals, government departments, and independent institutions.

Methods:
A qualitative research methodology was adopted for this study using semi-structured interviews of key informants. 25 participants working at nine organizations (government departments, independent institutions, and public hospitals) were interviewed. The interview transcripts were analyzed using a deductive analytic approach. Nvivo 10 was used to for data processing prior to thematic analysis.

Results:
The key factors contributing to the under-reporting of patient safety incidents were categorized as hospital related and nonhospital related (government or independent agency). The hospital-related factors were: lack of understanding, knowledge, and responsibility for reporting; lack of leadership and institutional culture of reporting incidents; perception of reporting as an additional burden. The nonhospital-related factors were: lack of feedback and training; lack of confidentiality mechanisms in the system; absence of policy safeguards to prevent any punitive measures against the reporting hospital; lack of leadership.

Conclusion:
Our study identified factors contributing to the under-reporting of
patient safety incidents in Indonesia. The lack of government support and absence of political will to improve patient safety incident reporting appear to be the root causes of under-reporting. Our findings call for concerted efforts involving government, independent agencies, hospitals, and other stakeholders for instituting reforms in the patient safety incident reporting system.

**Keywords**
under-reporting, patient safety, government organization, independent agencies, hospital, leader

---

**Corresponding author:** Inge Dhamanti (inge-d@fkm.unair.ac.id)

**Author roles:** **Dhamanti I:** Conceptualization, Data Curation, Formal Analysis, Methodology, Project Administration, Resources, Writing – Original Draft Preparation; **Leggat S:** Conceptualization, Supervision, Validation, Writing – Review & Editing; **Barraclough S:** Conceptualization, Supervision, Validation, Writing – Review & Editing; **Rachman T:** Formal Analysis, Validation, Writing – Review & Editing

**Competing interests:** No competing interests were disclosed.

**Grant information:** The author(s) declared that no grants were involved in supporting this work.

**Copyright:** © 2022 Dhamanti I et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**How to cite this article:** Dhamanti I, Leggat S, Barraclough S and Rachman T. *Factors contributing to under-reporting of patient safety incidents in Indonesia: leaders’ perspectives [version 2; peer review: 1 approved, 1 approved with reservations]* F1000Research 2022, 10:367 https://doi.org/10.12688/f1000research.51912.2

**First published:** 10 May 2021, 10:367 https://doi.org/10.12688/f1000research.51912.1
Introduction

Patient safety is a top priority in healthcare services. Moreover, it is also a critical policy issue as about 10% of hospitalized patients experience adverse events.1 In low- and middle-income countries, an estimated 134 million adverse incidents occur among hospitalized patients every year; these incidents account for an estimated 2.6 million deaths each year. Understanding the causes of incidents provides a foundation for patient safety improvement; therefore, reporting and analysis of patient safety incidents is a key imperative. Lessons learned from the reported safety incidents can help inform interventions to prevent recurrence of similar incidents. However, this can happen only if the hospitals take responsibility for instituting safety measures and share their data at the national level.2

Patient safety incident reporting systems have adopted various formats; a majority of these systems require reporting of incidents by health workers. The types of incidents that need to be reported vary in each country; these range from potential events to sentinel events such as incident that result in the death or disability of a patient. The World Health Organization (WHO) has developed a framework for reporting adverse events.3 Subsequently, WHO developed a minimal information model for incident reporting systems4 suitable for adoption by low-income, middle-income, and developed countries. However, the reporting rates show wide variability among countries, with some countries still struggling to implement the system.5

The United Kingdom is one of the countries that have successfully implemented incident reporting. English NHS organisations reported 2,246,622 incidents or 10.3% increase on the incidents reported from April 2019 to March 2020 compared to from April 2018 to March 2019. Another example is the Taiwan Patient Safety Reporting System which by 2019, the number of participating institutions has reached 12,491, and the cumulative number of notified cases reported from 2005 has reached 714,896. In contrast, the number of incidents reported to the Malaysian Incident Reporting and Learning system over the past 18 years of its operation has been quite low; the number of incidents reported in the year 2016 was 2,769. However, after the implementation of national online reporting system in 2017, the number of reports showed a 105.5% increase from the preceding year.

Indonesia is the world’s fourth most populated country, with an estimated 270 million people. The Commission for Hospital Accreditation (CHA) accredited only half of the country’s 2,925 hospitals. In 2005, the national patient safety incident reporting system was established and the national guidelines for reporting was revised on 2015.5 There were two reporting levels: hospital-level (internal reporting) and national-level (external reporting). Internal reporting required written reports of all incidents that occurred within the hospital, from near misses to sentinel events; these incidences were to be reported within 48 hours. External reporting referred to incident reports that have been reviewed, investigated, and forwarded to the National Committee via electronic means.

Incident reporting is a mandatory requirement for hospital accreditation; however, the performance of the reporting system is far from satisfactory. The national level data is not publicly accessible. Moreover, our previous study revealed very low rates of reporting. The total number of incidents reported in 2019 was 7,465; these incidents were reported from 334 out of the 2,877 hospitals (12%) in Indonesia.7 Evaluation of the system also revealed some weaknesses such as the existence of punitive system, lack of confidentiality, poor timeliness of reporting, and lack of responsiveness.8 The existing policies, guidelines, and regulations in Indonesia, to a large extent, do not satisfy the WHO-recommended
requirements for incident reporting systems. Furthermore, there is a lack of awareness and understanding of the reporting system among officials at almost all levels. Several studies have identified the barriers that contribute to low incident reporting rates in Indonesian hospitals, for example lack of knowledge about how and what to report, lack of feedback after reporting, lack of commitment, lack of rewards for reporting, the avoidance of conflict, timeliness of reporting, lack of socialization and training.9–11

The high prevalence of under-reporting severely undermines the capacity of incident reporting systems to promote learning and improve patient safety. We used London protocol framework in identifying the factors that lead to patient safety incident reporting that consisted of patient factors, task and technology factors, individual factor, team factor and work environment. In-depth characterization of factors that contribute to under-reporting is a key imperative to improve patient safety incident reporting systems. However, despite its importance, this form of study has never been conducted in Indonesia. Therefore, we aimed to analyze the factors that contribute to under-reporting of patient safety incidents in Indonesian public hospitals based on the perspectives of leaders of hospitals, government departments, and independent institutions.

Methods
Study design and sample
This was a descriptive qualitative study that used semi-structured interviews with key informants to thoroughly explore the participant's point of view. A purposive sample of organizations including government departments, independent institutions, and public hospitals in the East Java Province and the capital city of Indonesia; were selected for this study. Staff members in leadership positions, such as executives from independent institutions, heads of government organizations such as DHO/PHO, and hospital directors or heads of units, were among the key informants. However if during the interview day the participant was suddenly not available, they refer to someone who was familiar with the issue. The hospitals chosen were district referral public hospitals which are required to have a functional incident reporting system (internal and external reporting) managed by the hospital patient safety team for accreditation purposes; however, none of the sampled hospitals had ever reported any incident to the national level.

Data collection
Interviews were the only data collection methods used because they are the most direct and straightforward way of obtaining information from the participants. Letters were sent to the participating organizations to solicit the names of respective key persons. Participants were the key persons that were knowledgeable about the reporting of patient safety incidents in Indonesian hospitals. Following that, we arranged an interview with their respective offices, with no other people present. The focus of the interview was to determine the potential causes of under-reporting of patient safety incidents. We sent the information sheet, informed consent form, and question list a few days before the interview to make the interviewee feel at ease and familiar with the subject of the interview.12 We discussed informed consent prior to beginning the interview, and once everything was clear, we began the interview. The first author conducted the interviews in Indonesian. The interviews lasted from 20 minutes to one hour. All interviews were audio-recorded, transcribed, coded and managed using NVivo 10 (NVivo, RRID:SCR_014802). The majority of those interviewed did not know the researchers personally. To ensure confidentiality, the participant’s identity was noted using initials; however, the identity of the organization was not concealed. The transcripts were not returned to the participants, nor was feedback provided to them.

Data analysis
The transcripts were analyzed using a deductive analytic method focused on pre-defined themes derived from the research questions. The deductive approach employed an organizing framework that included coding by two coders; if there was disagreement, the two coders worked together to reach an agreement. The data were coded based on themes, with the initial goal of identifying certain core aspects of the data that specifically relate to the research questions.13 The first step was data reduction which entailed selection of the section or text from the transcript and their coding based on the themes. The second step entailed displaying the data in tabular format followed by drawing of conclusions. Subsequently, thematic analysis was performed for the synthesis and cross-referencing of emerging topics.14 We applied the triangulation principle by approaching the problem from numerous perspectives and with different lenses.

Ethics and consent
Ethical approval for this study was obtained from the Committee on Ethics for Human Research at the Faculty of Health Sciences, La Trobe University, Australia with the ethics application number FHEC13/197. Institutional approval was also obtained from each of the participating entities. Written informed consent was obtained from respondents prior to their enrolment.
A total of 26 participants were approached all but one agreed to be interviewed, with a total of 25 participants from nine organizations were enrolled. The details of the participants were presented in Table 1.

We categorized the responses according to the emerging themes.

Benefits of reporting
Participants from government departments and independent agencies agreed that the lack of appreciation of the value and significance of reporting incidents may lead to under-reporting.

“… the view from the hospital that the benefits for hospitals that report are limited, because there is no feedback.”
(National Committee, A2)

“Maybe they do not understand that the goal is learning because they always ask, what's in it for us if we report?”
(Indonesian Hospital Association (IHA) provincial level, A7)

Feedback and recommendations for further action
Participants reflected on the lack of feedback provided to the reporting hospitals. This was because of the lack of annual reporting and sharing of data at the national level. As recorded by one interviewee:

“If the hospital sees that sending reports is beneficial, maybe the number of reports could increase. So that is a factor of the hospital, so in addition to internal difficulties in the hospital, the hospital also needs to be provided some kind of feedback [after reporting]”
(IHA provincial level, A7)

Lack of training
Another reported cause of under-reporting was training, as not all hospitals received training or have been socialized by the government. Some participants reported:

“Maybe because the government, such as the Ministry of Health or the Provincial health department lacks the intensity to socialize to as much detail as possible. Maybe the other reasons are afraid of being found out that the hospital is [having] bad [reputation] if they have many [reported] cases.”
(C Hospital, H7).

“The cause was solely due to the government's lack of interest in socializing incident reporting.”
(A Hospital, H2)

Table 1. Type of organizations and the number of participants.

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Level</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government departments</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesian Ministry of Health (IMoH)</td>
<td>National</td>
<td>2</td>
</tr>
<tr>
<td>Provincial Health Office D (PHO)</td>
<td>Province</td>
<td>2</td>
</tr>
<tr>
<td>District Health Offices at District A (A DHO)</td>
<td>District</td>
<td>2</td>
</tr>
<tr>
<td>District Health Offices at District B (B DHO)</td>
<td>District</td>
<td>2</td>
</tr>
<tr>
<td>District Health Offices at District C (C DHO)</td>
<td>District</td>
<td>1</td>
</tr>
<tr>
<td><strong>Independent institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Committee on Hospital Patient Safety</td>
<td>National</td>
<td>2</td>
</tr>
<tr>
<td>(the National Committee)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commission for Hospital Accreditation (CHA)</td>
<td>National</td>
<td>2</td>
</tr>
<tr>
<td>Indonesian Hospital Association (IHA) at the</td>
<td>National</td>
<td>3</td>
</tr>
<tr>
<td>national and provincial levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Public hospitals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public hospital at District A (A Hospital)</td>
<td>District</td>
<td>3</td>
</tr>
<tr>
<td>Public hospital at District B (B Hospital)</td>
<td>District</td>
<td>3</td>
</tr>
<tr>
<td>Public hospital at District C (C Hospital)</td>
<td>District</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>
Knowledge about reporting
Lack of knowledge was identified as one of the reasons for low reporting rates; this included the lack of knowledge about the reporting process, lack of understanding of the requirement for reporting an incident, and lack of knowledge about the anonymity of reporting. As mentioned by some participants:

“The concern from the hospital [to report the incident] was lacking” (Hospital B, H5)

 “[To] Raise awareness of all health workers in this hospital to be more aware that it [the reporting] is something that needs attention.” (Hospital B, H4)

“The first cause was that health workers do not understand the importance of the reporting system. Secondly, they do not understand which incidents should be reported. (Hospital C, H8)

“But also maybe because they feel uncomfortable [in reporting] even though the report does not mention the name of the hospital, it is anonymous, but there might be inconvenience.” (IHA national level, A5)

Confidentiality of reporting
Many participants from independent agencies emphasized concerns pertaining to the confidentiality of reporting. As some participants have remarked:

“It is their belief, [the reporting is] not confidential and so on. Convincing them is also not easy, sometimes they have made it [the internal reporting], but it is not reported to the external agency. That […] well, that might have caused low reporting.” (National Committee, A1)

“… confidentiality, security, and then for the hospital level, staff should not be punished, including confidentiality [could improve the low reporting]” (CHA, C1)

Consequences of reporting
Some participants reported that the fear of repercussions of incident reporting, both personal and institutional, is a common cause of low reporting. According to an ICHA participant, fear of litigation by the patient often prevents the reporting of incidents attributable to acts of omission or commission by a health worker. This is due to lack of policy safeguards for the reporting hospital. As one participant reported:

“There must be some kind of law that guarantees that this report problem is safe for the hospital.” (IHA provincial level, A7)

The culture
Hospitals are yet to institutionalize a culture of patient safety and incident reporting owing to the prevalence of a blaming culture in hospitals. Some participants reported:

“I think there are many factors that become obstacles at the hospital level, ranging from difficulties in building a culture of safety to difficulties in building a culture of reporting. (IHA provincial level, A7)

“This hospital should also not cover up what happened […] sometimes it covers up what happens.” (Hospital B, H4)

Reporting as a burden
The participants working at hospitals claimed that incident reporting is a cause of additional stress for health workers, especially doctors and nurses. Moreover, the workload is not fairly distributed within the hospital patient safety team as only one person is usually assigned the task of incident-monitoring, reviewing, and taking further actions.

“The patient safety team itself cannot distribute the tasks, so the task is assigned to one person.” (Hospital C, H8)

The system
The perspectives from the independent agencies highlighted the need to change the reporting system from voluntary to mandatory. One participant reported:

“So this reporting should not only be encouraged but must be made mandatory […] if not reported there must be feedback from […] the related agencies about the lack of reporting, that is.” (IHA provincial level, H2)
The participants also emphasized the need for direct feedback from the related organization, both for reporting and non-reporting hospitals. Furthermore, there is no formal system of rewards and punishment, which could help improve the reporting.

**Leadership**

The participants from the independent agencies and hospitals mentioned about the lack of leadership at the government and hospital level. Strict monitoring and oversight is required for reporting of accidents, according to hospital-based participants. Moreover, hospital leaders also fail to understand the blame-free principle of incident reporting. Lastly, lack of participation by the regional health office was also one of the triggers for under-reporting.

“So indeed there must be a strict control, so frankly from the management there must be strict control, […] that means yes […] including supervision attached to the reported.” (Hospital B, H4)

“One of the causes for not reporting is punishment, so people do not want to report. Actually, the leader must have understood that concept of non-punitive safeguards against incident reporting?” (IHA national level, H1)

“Although the government has included [patient safety] in the accreditation standard, it needs to emphasize the involvement of regional health offices in this patient safety incident reporting system, so that several organizations that carry out monitoring can check and re-check each other” (IHA provincial level, H2)

A summary of responses is presented in Table 2 which shows some potential causes of under-reporting of patient safety incidents that were confirmed by the three types of organizations.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Participant responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefit of reporting</td>
<td>- Most hospitals do not understand the benefits and the importance of reporting</td>
</tr>
<tr>
<td></td>
<td>- Hospitals perceive no benefit of reporting</td>
</tr>
<tr>
<td>Feedback and recommendation for further action</td>
<td>- No direct feedback provided to hospitals</td>
</tr>
<tr>
<td></td>
<td>- There is no guarantee that the National Committee would take corrective action based on the report</td>
</tr>
<tr>
<td>Lack of training</td>
<td>- Not all hospitals have received training</td>
</tr>
<tr>
<td></td>
<td>- Lack of concern from the government regarding conducting socialization</td>
</tr>
<tr>
<td>Knowledge about reporting</td>
<td>- Lack of knowledge about the reporting procedure and the content of reporting</td>
</tr>
<tr>
<td></td>
<td>- Lack of awareness among hospital staff about the need for reporting the incident</td>
</tr>
<tr>
<td></td>
<td>- Feeling uncomfortable about reporting an incident</td>
</tr>
<tr>
<td>Confidentiality of reporting</td>
<td>- Many hospitals doubt the confidentiality of reporting</td>
</tr>
<tr>
<td>Consequence of reporting</td>
<td>- Concerns about legal issues</td>
</tr>
<tr>
<td></td>
<td>- There is no policy to ensure that it is safe for hospitals to report incidents</td>
</tr>
<tr>
<td>The culture</td>
<td>- Culture of reporting has not yet been established in hospitals</td>
</tr>
<tr>
<td></td>
<td>- There are barriers to building a patient safety culture and reporting culture in hospitals</td>
</tr>
<tr>
<td></td>
<td>- The blaming culture within hospitals is still dominant</td>
</tr>
<tr>
<td>Reporting as a burden</td>
<td>- Reporting and analysis of the incident takes time and effort, especially for doctors and nurses</td>
</tr>
<tr>
<td></td>
<td>- The hospital patient safety team’s performance is not optimal as the responsibility for carrying out the tasks or programs is assigned to a single person</td>
</tr>
<tr>
<td>The system</td>
<td>- Need to change the reporting system</td>
</tr>
<tr>
<td></td>
<td>- Lack of rewards and sanctions in the system</td>
</tr>
<tr>
<td>Leadership</td>
<td>- Lack of leadership at the hospital level</td>
</tr>
<tr>
<td></td>
<td>- Weak role of the IMOH in handling the reporting of incidents</td>
</tr>
</tbody>
</table>
We then classified the factors as hospital-related and nonhospital-related (government or independent agency) factors, as seen in Table 3.

### Discussion

Reporting of patient safety incidents in Indonesia continues to face many challenges. Most of the causes of under-reporting identified in this study have been reported in previous studies conducted in Indonesia\(^9\),\(^15\),\(^16\) and globally,\(^5\),\(^17\) either as barriers to reporting of incidents or as factors that affect patient safety incident reporting. After almost two decades, the implementation of the reporting system has not reached its potential and some classical problems have continued to persist.\(^9\)

This study found a divergence between government departments and independent organizations on the one hand and hospitals on the other hand about the perceived causes of under-reporting. Respondents from government departments and independent organizations reported about the lack of feedback for the hospital and lack of awareness of the benefits of reporting as the causes of under-reporting; hospitals, on other hand, did not refer to the same problem. Conversely, respondents from hospitals referred to the burden of reporting which was not reported by other organizations. This discrepancy could be attributed to the fact that the sampled hospitals had never reported the incidents to the National Committee; therefore, they were not aware about the issue of lack of feedback or did not perceive the benefits of incident reporting.

Reporting of incidents is an essential first step to learn from the experience. Failure to learn from incidents refers to the inability to obtain, retain, and apply the appropriate lessons from previous experiences in order to avoid future occurrences of the same or similar events.\(^18\) Inability to learn might mean lessons from past incidents were either not learnt or were not successfully implemented, monitored, and maintained.\(^18\)

In Indonesia, very little work has been done to document the lessons learned from the national patient safety incident reporting and how it can improve the processes of care or patient outcomes. There has been a lack of institutional feedback mechanism ever since the inception of the reporting system.\(^8\) As of April 2021, no annual reports, comprehensive information, or sharing of lessons learned from the reported incidents have been published on the website of the National Committee. This is unfortunate because lessons learned from the incidents can help save lives. Thus, many lives may have been lost just because the national system failed to learn from the incidents.

The root causes of under-reporting, either the hospital- or government-related, may reflect the lack of government support and the political will to improve patient safety incident reporting. Political will refers to the willingness of political leaders to take action to achieve a set of goals and to sustain the costs of these actions over time with some components include public commitment and resource allocation, enforcement of credible sanctions, continuity of effort, and institutionalization of learning and adaptation.\(^19\) For example, lack of funding for incident reporting in Indonesia was found to constrain the usefulness of reporting.\(^9\) Additionally, the role of government in upgrading knowledge and skills of health workers, either through socialization or training in incident reporting, was found to be inadequate; this contributed to the lack of knowledge about the reporting procedure among health workers, lack of understanding of the benefits of reporting, and the absence of institutional reporting culture.\(^11\) The clear message about the importance of reporting in the national policy has not been translated into daily practice at the hospital level. As a consequence, there is a lack of reporting culture.

### Table 3. Categorization of the causes of under-reporting.

<table>
<thead>
<tr>
<th>Hospital-related factors</th>
<th>Government or independent agency-related factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of understanding of the benefits of reporting</td>
<td>Policy-safeguards against any punitive measures against the reporting hospitals have not yet been developed</td>
</tr>
<tr>
<td>Lack of knowledge about reporting</td>
<td>Lack of government leadership</td>
</tr>
<tr>
<td>The responsibility to report the incident</td>
<td>Lack of feedback and socialization provided by related agency to hospitals</td>
</tr>
<tr>
<td>Lack of hospital-level leadership</td>
<td>Concerns pertaining to system confidentiality</td>
</tr>
<tr>
<td>Non-existing reporting culture</td>
<td>The nature of reporting should be changed from voluntary to mandatory</td>
</tr>
<tr>
<td>Reporting as an additional burden for health workers</td>
<td></td>
</tr>
</tbody>
</table>

---

\(^{9}\)\(^{15}\),\(^{16}\) \quad \(^{5}\),\(^{17}\)
Additionally, there is weak enforcement of the credible sanctions regarding the implementation of internal and external reporting system by hospitals as mentioned in Standard 9 of Patient Safety and Quality Improvement. The consequences for hospitals that fail to report or meet the quality standards and accreditation requirements have not been clearly stated; consequently, only 12% of Indonesian hospitals reported incidents in 2019. To improve reporting, policymakers must set specific and achievable goals for the incident reporting system; for example, application of credible sanctions for hospitals that do not report their incidents, although it is one of the mandatory requirements for accreditation.

There is poor continuity of efforts for assessing, monitoring, and evaluating the incident reporting system. The hospital incident reporting systems are fragmented and isolated; in addition, establishment of best practices for implementation requires data analysis and sharing at the national level. This also reflects the failure of government to learn and adapt to the emerging circumstances through the fifteen years of the incident reporting implementation.

Reforms in patient safety incident reporting are required to help overcome the government or independent agency-related causes of under-reporting in Indonesia. These reforms should include developing a national patient safety strategic plan, establishing priorities, developing a timetable, implementing the plan, monitoring and evaluating policy implementation, and revising and updating the policy. A good example has been shown by the Malaysian Ministry of Health. In Malaysia, patient safety incident reporting is included as one of the patient safety goals; the incident reports are compiled regularly and analyzed every three months by the healthcare facilities and submitted to the National system by 31st January of the subsequent year. A clear, unambiguous and firm policy is required to develop a successful system. To address the confidentiality issue, Indonesia should adopt the NHS policy where the identity of the reporter, patient, health worker, and other individuals involved in the incident is not reported. The system is programmed to remove any personal identifiers in the report. This inculcates a sense of safety among the reporting health workers and hospitals and helps increase the number of reports. Further, the reporting also needs to be categorized into mandatory reporting for adverse events and sentinel events and voluntary reporting for any other incidents. The primary focus of reporting should be to draw lessons. Reporting needs to be made compulsory and no incident should be reported as zero incident, so that there is no excuse for not reporting the incident. Lastly, good patient safety leadership at the national, local, and hospital level is crucial to foster institutional changes and improve patient safety.

A key limitation of this study is the potential lack of representativeness of the study sample. Moreover, the opinions of individuals may not be a true reflection of the organization. Thus, due diligence should be exercised while interpreting our results. However, this study addresses several critical issues related to the reporting of patient safety incidents and identifies several areas for improvement.

Conclusion
Our study identified several causes of underreporting of patient safety incidents in Indonesia from the perspectives of government departments, independent agencies, and hospitals, which were classified as hospital-related factors and government or independent agency-related factors. The hospital-related contributing factors include a lack of understanding of the benefits of reporting, a lack of knowledge about reporting, the responsibility to report the incident, a lack of hospital-level leadership, a lack of reporting culture, and reporting as an additional burden for health workers. Meanwhile, government or independent agency-related factors included a lack of policy, a lack of government leadership, a lack of feedback and socialization provided to hospitals by related agencies, and system confidentiality.

There was disagreement among hospital and government or independent agency leaders about the perceived causes of under-reporting. The root causes of under-reporting may reflect a lack of government support and political will to improve patient safety incident reporting. As a result of our findings, we recommend that government agencies, independent agencies, hospitals, and other stakeholders work together to implement comprehensive reforms in patient safety incident reporting.

Author contributions
ID: conceptualization, data curation, analysis, methodology, project administration, resources, writing original draft and preparation.
SL and SB: conceptualization, supervision, validation, review and editing.
TR: data analysis, validation, review and editing.
Data availability

Underlying data


The project contains the following underlying data:

- Interview results.

Extended data


Data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

References

15. Miles MB, Huberman AM: Qualitative data analysis: An expanded sourcebook. Sage; 1994.
Open Peer Review

Current Peer Review Status:  

Version 2

Reviewer Report 26 May 2022

https://doi.org/10.5256/f1000research.134017.r139010

© 2022 Windi Y. This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Yohanes Kambaru Windi
Poltekkes Kemenkes Surabaya, Surabaya, Indonesia

The statement "However if during the interview day the participant was suddenly not available, they refer to someone who was familiar with the issue". Suggestion: If all targeted key informants were available for the interview. I think that the sentence above is not necessary and perhaps deleted.

Overall the manuscript is worth reading and ready to be indexed (approved). Just add the date of ethical clearance as stated in the author's response.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: I have a background in public health, especially health promotion and behavior, health system, health insurance, and qualitative research

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Version 1

Reviewer Report 04 April 2022

https://doi.org/10.5256/f1000research.55123.r127959

© 2022 Windi Y. This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.
Abstract:
- Delete the sentence, “from the perspectives of leaders of hospitals, government departments, and independent institutions.,” as it is already stated in the Method subsection.
- A brief statement on how 25 participants were recruited is important to state in the method subsection.

Introduction:
- There are no supporting sources of reference in paragraphs 3 to 6.
- It is stated that “Several studies have identified the barriers that contribute to low incident reporting rates in Indonesian hospitals.” What are they? Give an example of the reports.

Methods:
- Study design and sample: Explain why the participants come from the leaders, not others. If the leader then in what level? Why aren’t the staff responsible for the reporting task?
- I am afraid this sentence, “In regard the reflexivity, the researchers, in particular the first researcher, are interested in patient safety and have performed a number of research studies on the related topic. She has spent her time at the university in Indonesia and has the necessary expertise to examine the cultural and Indonesian context relevant to the research” goes to the introduction section as the background of this study.
- Table 2 perhaps add one column to explain who are the participants (what level of management).
- Provide the date of Ethical clearance issued.

Results:
- More extended quotes will be beneficial to provide a comprehensive picture of the problem of reporting system
- Confidentiality of reporting: Provide more quotes from the participants as It is stated “some participants have remarked”
- If possible, place the statement of the three types of informants (organization) for each theme.

Discussion:
- Supporting references to the claim of this research should be expanded.
- Detail of discussion each theme generated from the analysis will make the manuscript completer and more interesting.

Conclusion:
- A little expansion of the conclusion is needed.
- Refers back to the theme drawn in your results. The conclusion needs to state these issues as the contributing factors of under-reporting of a patient safety incident.
As a factual contribution to this study, would you provide an example of reformation on patient safety incident reporting?

Is the work clearly and accurately presented and does it cite the current literature?
Partly

Is the study design appropriate and is the work technically sound?
Partly

Are sufficient details of methods and analysis provided to allow replication by others?
Partly

If applicable, is the statistical analysis and its interpretation appropriate?
Not applicable

Are all the source data underlying the results available to ensure full reproducibility?
Yes

Are the conclusions drawn adequately supported by the results?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: I have a background in public health, especially health promotion and behavior, health system, health insurance, and qualitative research

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 15 May 2022

Inge Dhamanti, Faculty of Public Health Universitas Airlangga, Surabaya, Indonesia

Abstract:
○ Delete the sentence, “from the perspectives of leaders of hospitals, government departments, and independent institutions.”, as it is already stated in the Method subsection.

Response: Deleted as suggested

○ A brief statement on how 25 participants were recruited is important to state in the method subsection.

Response: More information has been added to the Methods section.

Introduction:
○ There are no supporting sources of reference in paragraphs 3 to 6.
Response: There are some references in paragraphs 3 to 6 in the form of link as instructed by the Guidelines for Author below:

Web links, URLs, and links to the authors' own websites should be included as hyperlinks within the main body of the article, and not as references.

- It is stated that “Several studies have identified the barriers that contribute to low incident reporting rates in Indonesian hospitals.” What are they? Give an example of the reports.

Response: More information has been provided.

Methods:
- Study design and sample: Explain why the participants come from the leaders, not others. If the leader then in what level? Why aren't the staff responsible for the reporting task?

Response: Leaders play critical roles in the development of an effective and efficient reporting system. We felt it was critical to understand the leader's perspective as well. We included the health workers/staff responsible for incident reporting in a separate study.

More information is added about the level of leadership.

Staff members in leadership positions, such as executives from independent institutions, heads of government organizations such as DHO/PHO, and hospital directors or heads of units, were among the key informants.

- I am afraid this sentence, “In regard the reflexivity, the researchers, in particular the first researcher, are interested in patient safety and have performed a number of research studies on the related topic. She has spent her time at the university in Indonesia and has the necessary expertise to examine the cultural and Indonesian context relevant to the research” goes to the introduction section as the background of this study.

Response: Thanks for your feedback. The sentences has been removed.

- Table 2 perhaps add one column to explain who are the participants (what level of management).

Response: As the name of the organization was revealed, the position of the participants in the table provided clues as to who the participants are. The information has instead been added to the method section.

- Provide the date of Ethical clearance issued.

Response: As this study was part of a larger study, the ethical clearance was dated 10
October 2013, with data collection taking place from 2013 to 2015.

**Results:**
- More extended quotes will be beneficial to provide a comprehensive picture of the problem of reporting system

**Response:** Thanks for your feedback. We've included some examples of extended quotes in the results section. Table 2, on the other hand, only highlighted the themes and summaries of the quotes.
  - Confidentiality of reporting: Provide more quotes from the participants as it is stated “some participants have remarked”

**Response:** Thanks for your feedback. More quotes have been added in the Result section.
  - If possible, place the statement of the three types of informants (organization) for each theme.

**Response:** In the result section, we have already described each theme and provided extended quotes accompanied by the type of organization. The majority of the benefits of reporting theme, for example, came from government departments and independent agencies that stated that hospitals see no benefit from reporting incidents.

**Discussion:**
- Supporting references to the claim of this research should be expanded.

**Response:** Thanks for your feedback. Some new references have been added in the Introduction and Discussion sections.
  - Detail of discussion each theme generated from the analysis will make the manuscript completer and more interesting.

**Response:** Thank you for your feedback. We believe there are many other literatures that focus on each theme or the factors contributing to under-reporting; however, in this paper, we want to highlight the differences in leaders' perspectives on the factors. As a result, rather than going into detail about each theme, we classified the factors into two groups and discussed the root cause and potential recommendations.

**Conclusion:**
- A little expansion of the conclusion is needed.

**Response:** The conclusion has been revised.
  - Refers back to the theme drawn in your results. The conclusion needs to state these issues as the contributing factors of under-reporting of a patient safety incident.
Response: Thanks for your suggestion. We revised the conclusion to include more information about the contributing factors.

- As a factual contribution to this study, would you provide an example of reformation on patient safety incident reporting?

Response: In the Discussion section, we provided examples of WHO-recommended reforms that could be implemented in Indonesia. A Malaysian example and the National Health System were also included.

Competing Interests: None declared

Reviewer Report 09 September 2021

https://doi.org/10.5256/f1000research.55123.r92864

© 2021 MacLure K. This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Katie MacLure
Independent Research Consultant, Aberdeen, UK

Factors contributing to under-reporting of patient safety incidents in Indonesia: leaders’ perspectives
Thank you for the opportunity to review your article. It is well-written and poses important questions for the Indonesian health service and therefore patients and their families. I believe your article can be strengthened by following my constructive comments as follows. I wish you well with your manuscript.

Abstract
- Check grammar in the final sentence of the Methods.
- Check consistency of hyphenating hospital related.
- The sentence starting 25 participants should be moved to Results section. There should instead be a description of the interview questions in the Methods section.
- The Methods section should contain a statement on ethical review and how participants were recruited.

Introduction
- Sentinel events needs further explanation.
- Last sentence in paragraph 2 needs at least one reference as does many of the following paragraphs in the Introduction.
Paragraph 4, has should be had to maintain past tense.

It is unusual to have single sentence paragraphs so consider merging 3 and 4.

Typo – 'sytem' instead of 'system'.

The final paragraph of the Introduction is entirely unreferenced. This is a serious issue impacting the quality of this article.

There is needs to be a description of tools previously used to explore lack of reporting.

Methods

Need to explain why using phenomenology and what it means in this context and provide references. Which type of phenomenology? Can you make this claim when you spoke to some for as little as 20 minutes with no follow up?

Inconsistency in calling participants key informants / leaders.

The numbers participating should be reported in the Results not Methods section.

No mention of informed consent nor ethical issues (found later at end of Methods section). If you report a participant's initials and hospital name then they are in effect identifiable – did they consent to such exposure? As they were nominated by someone more senior within the hospital then their identity is known and could have repercussions. Were they provided with an information sheet?

Need to justify the decision to share the questions in advance. Fine to do so, but you must explain and reference.

Grammar – ‘the interviews were lasted’.

Delete the last sentence in the Data Collection paragraph. It is irrelevant and should have been declared in third person.

Data analysis first sentence is repetition from Data collection section.

Two coder but did they work independently then meet to agree or worked together from the outset?

Table 1 should be in the Results section.

I don’t have access to the question set so cannot relate this to the themes. What was the basis for the questions? There are many validated tools which could have been adopted to allow comparison with other studies – why did you/did you not use such a tool?

Last sentence in Data analysis needs more explanation – which lenses? How can you apply different questions from those in the interview? You are adopting an unusual approach to triangulation so must justify and reference.
Results

- Are the ‘participants’ responses’ in Table 2 verbatim quotes? These are short, do they capture the context for reporting?
- Did you do a subgroup analysis of different hospital types and described earlier?
- What is the value of Table 2 being placed before the longer participant quotes? If not including verbatim quotes then it may make more sense to move to after the extended quotes.
- Tables should appear close after the statement which references the table.

Discussion

- ‘Updation’ is not an English word – maybe it should be!

- The Discussion section needs a lot more referencing to the related literature throughout. At points it comes across as a personal mission with relating the results to the literature.

Conclusion

- This is very brief. I suggest going back to your original aim and reflecting that in this section. Also indicating any further research which would support development of an improved reporting culture.

Is the work clearly and accurately presented and does it cite the current literature?
Partly

Is the study design appropriate and is the work technically sound?
Partly

Are sufficient details of methods and analysis provided to allow replication by others?
Partly

If applicable, is the statistical analysis and its interpretation appropriate?
Not applicable

Are all the source data underlying the results available to ensure full reproducibility?
Yes

Are the conclusions drawn adequately supported by the results?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Digital Health; Health Inequalities; Qualitative Research

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.
Author Response 15 May 2022

Inge Dhamanti, Faculty of Public Health Universitas Airlangga, Surabaya, Indonesia

Abstract
○ Check grammar in the final sentence of the Methods.

Response: Thanks for your feedback.
It has been revised into:

The interview transcripts were analyzed using a deductive analytic approach. Nvivo 10 was used for data processing prior to thematic analysis.

○ Check consistency of hyphenating hospital related.

Response: Changes have been made

○ The sentence starting 25 participants should be moved to Results section. There should instead be a description of the interview questions in the Methods section.

Response: The sentence has been relocated to the Result Section.

○ The Methods section should contain a statement on ethical review and how participants were recruited.

Response: how the participants were recruited were added.

Introduction
○ Sentinel events needs further explanation.

Response: Further explanation was added.

○ Last sentence in paragraph 2 needs at least one reference as does many of the following paragraphs in the Introduction.

Response: Reference has been added.

○ Paragraph 4, has should be had to maintain past tense.

Response: Changed into:

Indonesia is the world's fourth most populated country, with an estimated 270 million people. The Commission for Hospital Accreditation (CHA) accredited only half of the country's 2,925 hospitals. In 2005, the national patient safety incident reporting system was established. There were two reporting levels: hospital-level (internal reporting) and national-level (external reporting). Internal reporting required written reports of all incidents that occurred within the hospital, from near misses to sentinel events; these incidences were to be reported within 48 hours. External reporting referred to incident reports that have been reviewed, investigated, and forwarded to the National Committee via electronic means.
It is unusual to have single sentence paragraphs so consider merging 3 and 4.

**Response:** the paragraphs were merged

- Typo – 'sytem' instead of 'system'.

**Response:** revised

- The final paragraph of the Introduction is entirely unreferenced. This is a serious issue impacting the quality of this article.

**Response:** Reference was added to the paragraph.

- There is needs to be a description of tools previously used to explore lack of reporting.

**Response:** The tool is explained in the paragraph.

We used London protocol framework in identifying the factors that lead to patient safety incident reporting that consisted of patient factors, task and technology factors, individual factor, team factor and work environment.

**Methods**

- Need to explain why using phenomenology and what it means in this context and provide references. Which type of phenomenology? Can you make this claim when you spoke to some for as little as 20 minutes with no follow up?

**Response:** Thanks for your feedback. We revised the methodology and chose qualitative descriptive analysis rather than phenomenology as the basis for our findings. Due to the fact that it is more appropriate than phenomenology.

This was a descriptive qualitative study using semi-structured interviews of key informants that was intended to thoroughly explore the point of view of the participant.

- Inconsistency in calling participants key informants / leaders.

**Response:** Changed from key informants/leaders into participant.

- The numbers participating should be reported in the Results not Methods section.

**Response:** Table 1 has been moved into Result section

- No mention of informed consent nor ethical issues (found later at end of Methods section). If you report a participant's initials and hospital name then they are in effect identifiable – did they consent to such exposure? As they were nominated by someone more senior within the hospital then their identity is known and could have repercussions. Were they provided with an information sheet?
Response: We sent the information sheet, informed consent form, and question list a few days before the interview. We discussed informed consent prior to beginning the interview, and once everything was clear, we began the interview.

- Need to justify the decision to share the questions in advance. Fine to do so, but you must explain and reference.

Response: We decided to share the question ahead of time so that the interviewee would feel at ease and familiar with the subject of the interview. And I've inserted the reference.

- Grammar – ‘the interviews were lasted’.

Response: revised into “the interviews lasted ….”

- Delete the last sentence in the Data Collection paragraph. It is irrelevant and should have been declared in third person.

Response: Thanks. The sentence is removed.

- Data analysis first sentence is repetition from Data collection section.

Response: The sentence is removed.

- Two coder but did they work independently then meet to agree or worked together from the outset?

Response: Yes. The sentence has been revised.

- Table 1 should be in the Results section.

Response: Table 1 has been moved to Results section.

- I don’t have access to the question set so cannot relate this to the themes. What was the basis for the questions? There are many validated tools which could have been adopted to allow comparison with other studies – why did you/did you not use such a tool?

Response: Thanks for the question. I agree that there has been a lot of research done on similar topics. However, in order to make the interview questions more relevant to the Indonesian context, we decided to develop them in accordance with the National Guidelines for Patient Safety Incident Reporting. The introduction now includes a reference to the guidelines.

- Last sentence in Data analysis needs more explanation – which lenses? How can you apply different questions from those in the interview? You are adopting an unusual approach to triangulation so must justify and reference.

Response: Thanks for the comment. What I mean by different questions is that the interview was semi-structured, and the probe to the next question could be different because hospitals, government departments, and independent institutions all have different roles when it comes to incident reporting. However, I revised the sentence to make it clearer.
Results

- Are the ‘participants’ responses’ in Table 2 verbatim quotes? These are short, do they capture the context for reporting?
  
  **Response:** Table 2 did not contain the quotes but rather summary of the quotes instead. Some quotes are presented in the next paragraphs.

- Did you do a subgroup analysis of different hospital types and described earlier?
  
  **Response:** As shown in table 2, all hospitals are of the same type: public hospitals. As a result, we did not conduct a subgroup analysis of different hospital types.

- What is the value of Table 2 being placed before the longer participant quotes? If not including verbatim quotes then it may make more sense to move to after the extended quotes.
  
  **Response:** Thanks for your suggestion. Table 2 is removed after the extended quotes.

- Tables should appear close after the statement which references the table.
  
  **Response:** Revised.

Discussion

- ‘Updation’ is not an English word – maybe it should be!
  
  **Response:** Sorry for the typo. It should be updating. Revised into: These reforms should include developing a national patient safety strategic plan, establishing priorities, developing a timetable, implementing the plan, monitoring and evaluating policy implementation, and revising and updating the policy.

- The Discussion section needs a lot more referencing to the related literature throughout. At points it comes across as a personal mission with relating the results to the literature.
  
  **Response:** Some references have been added

Conclusion

- This is very brief. I suggest going back to your original aim and reflecting that in this section. Also indicating any further research which would support development of an improved reporting culture.
  
  **Response:** Thank you for your suggestion. We have revised the conclusion.

**Competing Interests:** None declared
The benefits of publishing with F1000Research:

- Your article is published within days, with no editorial bias
- You can publish traditional articles, null/negative results, case reports, data notes and more
- The peer review process is transparent and collaborative
- Your article is indexed in PubMed after passing peer review
- Dedicated customer support at every stage

For pre-submission enquiries, contact research@f1000.com