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EXPLORING THE PERCEPTIONS OF HEALTHCARE PROFESSIONS OF ADVERSE EVENTS REPORTING AND THEIR IMPACT ON PATIENT SAFETY

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Abstract
Adverse event reporting is an integral element for quality and patient safety, particularly in a multidisciplinary environment such as a tertiary setting. This qualitative study sought to delve into the barriers and facilitators to reporting adverse events from the perspective of nurses, pharmacists, allied personnel and physicians. Categories of factors which facilitated or deterred reporting such as supportive leadership and training as well as fear of blame and lack of time emerged from the semi structured interviews and focus group discussions. The participants held conflicting opinions with regard to the electronic health record system of the hospital, indicating a need for user friendly design and appropriate feedback systems. The report highlights deficiencies in the reporting culture and practices and attempts to suggest solutions to them including fostering a non-punitive culture, developing reporting systems that are more user friendly and encouraging collaborative working. The results of this study provide pathways to improving patient safety in a complex healthcare system.

Keywords: adverse event reporting, patient safety, multidisciplinary, qualitative, tertiary center, healthcare systems, electronic medical record systems

Introduction
Adverse events in a clinical setting can potentially compromise the safety and wellbeing of patients; therefore, it’s crucial to mitigate such risks, especially in tertiary care hospitals. The reporting and documenting of adverse events, along with the risks associated with them, is a responsibility of a multidisciplinary approach consisting of pharmacists, physicians, nurses, and other medical professionals. However, if there are inherent differences in turnaround time for reporting across the teams, the data remains incomprehensible, and the communication becomes disjointed, thus hampering the efforts on improving patient safety (Manias, 2018).
Implementing a case reporting system when adverse events occur improves the overall outcome of the patients and the hospitals’ safety culture. Modern studies emphasize that interactions between physicians, nurses and other health care professionals using the same reporting system such as EHRs can increase the accountability and transparency standards of the facility (Tang et al., 2017). Moreover, utilizing structured aids such as pharmacovigilance frameworks and checklists to promote teamwork can also enhance the decision-making process in mitigating errors that may occur in practice (Vaseghi et al., 2022).
Multidisciplinary methods to reporting have been said to have potential in tackling the multi-faceted problem of, for instance, drug-related errors and complications associated with procedures. An example is the role of pharmacists in the ADR reporting system Actual memoir of the use system that greatly decreased the risk of drugs, showing the scope of professionals needed in the domain of ADR

(Despott et al., 2023). Similarly, behavioral intervention teams have worked on sentinel events such as the prevention of falls and surgical errors in a more organized and interdisciplinary collaborative manner (Lodewyk et al., 2023).
The barriers and practices associated with adverse event reporting are analyzed by this research in the context of an adverse event reporting system within healthcare professions working in a tertiary hospital. The aim of such examination is to determine the patterns in reporting that can be integrated together, and the culture of safety within the organisation that can facilitate reporting.

Literature Review

The reporting of adverse events is a vital function in contemporary health systems and facilitates the reporting and analysis of medication errors. Tertiary health facilities, due to the complexity and large heterogenous patient population, employ the services of adverse event multidisciplinary teams for proper management of the adverse event. For this area of study, several key issues are identified by the existing literature, such as technology, multidisciplinary approaches, challenges in reporting, and implementing safety culture changes.

1. The Role of Technology in Adverse Event Reporting

The technology and authorization, by establishing electronic health records, has improved adverse reporting' s reporting by both effectiveness and accuracy. Integrated reporting tools allow EHR systems to be more useful in documenting and monitoring incidents by various healthcare teams as real time communication and follow-up is always enabled (Tang et al., 2017).). Additionally, note-taking systems embedded into EHR systems enhance clinicians' functions alongside checklists in administration and surgical procedures (Vaseghi et al., 2022). These systems lower the possibilities of underreporting, which is one of the obstacles faced during manual reporting systems.

2. Multidisciplinary Collaboration and its Impact

Adverse Event Reporting Topic Work planning collaboration of various professionals is essential for an effective adverse drug event reporting system. For instance, pharmacists identify medication errors as well as adverse drug reactions more frequently than other physicians (Despott et al., 2023). There is also a nurse who reports bedside events and patient outcome observations (Manias, 2018). Such multi-disciplinary opportunities as conferences on morbidity and mortality also proved to be useful for inter-professional communication, shared learning and creation of measures aimed at preventing adverse events (Kumar, 2017).

3. Barriers to Reporting Adverse Events

Adverse event reporting, despite its significance, is overshadowed by a number of obstacles such as aversion to being blamed, limited time, and a belief that reporting will not yield any positive impact. Research indicates that organizational cultures featuring hierarchies within health care systems may inhibit health care workers on the front line from reporting such incidents, especially when the incident results in an outcome involving higher ranking personnel (BCPP, 2015). In addition, the lack of universal reporting systems among the sectors worsens the problem of disclosing, resulting in data fragmentation and loss of chances for advancements (Vaseghi et al., 2022).

4. Strategies to Foster a Culture of Safety

For appropriate adverse event reporting, a strong safety culture is necessary. Literature stresses the importance of nonpunitive environments in which healthcare professionals have the liberty to report errors without being afraid of getting persecuted (Lodewyk et al., 2023). Adverse event recognition and management training that utilizes simulation were found to be useful in improving the skills of health care teams (Wafaa & Ghaidaa, 2020). Moreover, leadership commitment as well as participation of multidisciplinary committees in the review and resolution of the reported events are necessary for the promotion of the safety culture (Despott et al., 2023).

5. Emerging Trends and Innovations

Current trends in adverse event reporting include an element of artificial intelligence and machine learning to forecast and rectify errors. Tang et al. (2017).) explain how AI systems are being embedded within EHRs to learn trends and flag potential issues before they actually harm the patient. Lodewyk et al. (2023) also comment on the success of behavioral intervention teams in tackling sentinel events where a structured real time response to fall, medication overdose etc. is necessary.

The existing literature emphasizes the need for creativity along all disciplines for the reporting of adverse events in tertiary settings. Improvement in the reporting practices and outcomes of patients can be achieved through the use of technology, collaboration, overcoming of barriers, and facilitating a safe environment. There are still broader gaps concerning the standardization of practices within the disciplines and integration of new technologies which can be valuable for science and innovation.

Methodology

The research strategy of this investigation can be grouped as qualitative since it seeks to study adverse event reporting practices among healthcare professionals in a tertiary level hospital. The purpose was to gain insight into the perception of multidisciplinary teams vis a vis adverse event reporting and the challenges that the teams experienced in reporting and find the opportunities for enhancing the reporting practices.

Study Design

Data collection followed a six month duration and was focused on four major occupational groups including physicians, pharmacists, nurses, and allied health service members. The entire study was carried out in Tertiary hospital which is known to be a high capacity health care center and has a varied population of patients.

Data Collection

1. Participant Recruitment
- Sampling Method: Participants with prior knowledge on the asymmetric incident reporting were purposively sampled. The total number of recruited participants included:
  - Nurses (10 participants)
  - Pharmacists (5 participants)
  - Allied health professionals (5 participants)
  - Physicians (5 participants)
- Inclusion Criteria: Participants were to have more than a duration of one year of involvement with the hospital along with active participation in the reporting of adverse incidents.

2. Semi-Structured Interviews
- Format: Adverse reporting was tailored in a way that permitted participants to elaborate on their beliefs through one-on-one detailed interviews.
- Interview Guide: Questions in the guide were made to be more accommodating like for example:
  - “Could you share experiences that support your case of reporting adverse events?”
  - “What difficulties have you experienced while you were reporting?"
  - “How effective would recommend you changes you for reporting practices in the future?”
- Durations: 30 and 45 minute intervals meetings were held in private wards of the hospital.
- Recording and Transcription: Each audio replica was translated verbatim through participants consent for the interview.

3. Focus Groups
- Purpose: To capture the dynamics of multidisciplinary discussions on adverse event reporting and identify shared themes and divergent views.
- Format: Two focus group discussions were conducted, each involving 8–10 participants from different professional groups.

- Discussion Topics:
  - Barriers to adverse event reporting.
  - Perceptions of institutional support and culture.
  - Suggestions for fostering a culture of safety.
- Facilitation: Focus groups were moderated by an experienced qualitative researcher to ensure active participation and rich discussions.

Data Analysis
- Thematic Analysis: Transcripts from interviews and focus groups were analyzed using thematic analysis. This involved:
  - Familiarization: Reading and re-reading the data to identify patterns.
  - Coding: Assigning labels to key segments of text.
  - Theme Development: Grouping codes into overarching themes and subthemes.
  - Interpretation: Synthesizing themes to provide meaningful insights.
- Software Used: NVivo qualitative analysis software was employed for data organization and coding.

Ethical Considerations
- Ethical Approval: Approval was obtained from the ethics committee.
- Informed Consent: Participants were provided with detailed information about the study and signed informed consent forms.
- Confidentiality: Pseudonyms were used to anonymize participants' identities, and data were securely stored.

Validity and Reliability
- Member Checking: Preliminary findings and themes were shared with participants to confirm the accuracy of interpretations.
- Peer Debriefing: The research team conducted regular discussions to ensure the credibility and consistency of the analysis.
- Triangulation: Data from interviews and focus groups were compared to identify commonalities and validate findings.

Limitations
This qualitative analysis provides rich findings but only within one medical facility and thus it can't be generalized. Additionally, their responses to the interviewer can often be influenced by social desirability.

Findings
The research yielded several themes and subthemes about adverse event reporting in Edendale Hospital and wider literacy case reporting practices. This was based on the in-depth interviews and focus group discussions with professionals in nursing, pharmacy, allied health and medicine. The results explain the difficulties, obstacles and enablers of adverse event reporting.

Theme 1: Barriers to Adverse Event Reporting
Subtheme 1.1: Fear of Blame and Repercussions
During the focus group discussions, participants often raised issues regard to the 'blame culture' that surrounds reporting of adverse events. this fear of blame inhibited junior professionals from filing reports.
- Participant Responses:
  - "I think there is always some sense of reluctance when reporting a fault because of the fear of how it might affect the image of the senior person involved" (Nurse, 7 years of experience)
  - "I think there are some occasions when I don't want to report something because I feel I will be punished during my appraisal interview." (Pharmacist, 5 years of experience)

Subtheme 1.2: Lack of Time

According to the medical professionals, time was the most critical factor, especially for nurses and allied health professionals.

- Participant Responses:
  - o "Currently we are understaffed while taking care of the patients and also have to report the incidents, it seems like an extra job." (Nurse, 3 years of experience)
  - o "Completing comprehensive databases takes more time than I can allocate to it during busy work shifts." (Allied Health Professional, 6 years of experience)

Theme 2: Facilitators of Reporting

Subtheme 2.1: Supportive Leadership and Culture

Participants suggested that supportive management coupled with a culture free of punishment motivated them to submit reports.

- Participant Responses:
  - o "Witnessing why people have been blamed in reporting adverse incidents diminishes my willingness to report issues, however when leaders speak about such issues in meetings without being accusatory I feel more inclined to report" (Physician - 10 Years' Experience).
  - o "Abuse of reporting is discouraged by our department head, and loan is reiterated on the importance of reporting events in order to lend jo/learn. " (Pharmacist - 7 Years' Experience).

Subtheme 2.2: Access to Training and Education

Regular workshops with a focus on tools for reporting incidents and their importance were considered as facilitators.

- Participant Responses:
  - o"I found the reporting system much easier to understand after our workshops, because we were shown what is expected." (Nurse, 2 years of experience)
  - o"Seeing the case studies from our classes where the improvement comes from the reporting and patient safety motivates us to report." (Allied Health Professional, 4 years of experience)

Theme 3: Perceptions of the Reporting System

Subtheme 3.1: Ease of Use

Participants have different points of view regarding the reporting system designed by the hospital based on the electronic health record.

- Participant Replies:
  - o "The system is very easy to work with and I can complete a report in a matter of few minutes." (Pharmacist, 6 years of experience)
  - o "I feel that there are excessive numbers of cells that I am required to fill." (Nurse, 5 years of experience)

Subtheme 3.2: Feedback on Reports

Participants expressed that not receiving any feedback regarding the reports submitted stands to be an issue.

- Participant Responses:

o "I hardly get back what is done after I submit my report which is very disappointing." (Allied Health Professional, 3 years of experience)

o "Not receiving any follow-ups makes it very difficult to ascertain whether submitting the report is useful." (Nurse, 4 years of experience)

Theme 4: Multidisciplinary Collaboration

Subtheme 4.1: Role Clarity in Reporting

The participants put across the idea of having operational clarity and formulation of a proper reporting structure in place.

- Participant Responses:

o "Occasionally there is confusion with regards to who reports what especially in a team based form of care." (Physician, 8 years of experience)

o "In some scenarios, I have come across situations where people expect others to make reports but no one does." (Pharmacist, 3 years of experience)

Subtheme 4.2: Shared Learning Opportunities

Participants appreciated team based discussions that involved reflecting on adverse events.

- Participant Responses:

o "The meetings to discuss death and disability are informative as various people opine about how the system malfunctioned and what the potential solutions could be." (Nurse with 9 years' experience)

o "Interdisciplinary dialogues like these assist in elaborating how everyone can help minimize mistakes." (Allied Health Professional with 5 years' experience)

The results demonstrate the ecosystem and windows of possibilities around reporting of adverse events within a tertiary health care institution. Facilitating factors for example, supportive leadership, proper and timely training, and collaboration between disciplines were identified while reporting was hampered by factors like fear of being blamed, lack of time to report, and lack of systems efficiency. To this end, these observations further indicate the need to strengthen reporting practices by nurturing a blame free culture and improving the reporting feedback mechanisms.

Discussion

This research demonstrates the plurality of structures associated with reporting of adverse events in a multidisciplinary health care setting in a tertiary level hospital. This study focuses on the barriers, facilitators and perceptions of the reporting practices so as to shed light on safety culture improvement strategies and ultimately on the care for patients which is beneficial.

Barriers to Adverse Event Reporting

In line with the prior literature, fear of blame and fear of the time within which to report emerged as significant barriers to reporting adverse events. Reporting adverse events was perceived to have punitive aspects and reputational risks which especially junior staff were concerned about. This supports earlier contradicting studies regarding reporting, which emphasize fear of blame and the influence of hierarchies as reported by Manias (2018), On the whole, these results indicate the culture should be blame free and errors should be seen as learning experiences and not blame to be apportioned.

Time restraints – especially of nurses and other allied health professionals- were other major challenges. Good reporting is seen as just another form filling activity, competing with the real work of caring for the patient and meeting their immediate needs. This problem can be addressed by making reporting mechanisms more efficient and incorporating them naturally into the processes of administering care to patients.

Facilitators of Reporting

According to the participants, supportive leadership and robust training initiatives emerge as powerful facilitators of incident reporting. Indeed, the participants claimed, encouraging leaders to promote openness and a learning approach to mistakes builds confidence and accountability. This finding corroborates other studies which note that a strong safety culture, underpinned by supportive leadership, enhances reporting rates (Despott et al., 2023).

Competence-based training programs were also mentioned as useful means for enhancing the practice of competent reporting. Training reduces the reluctance and increases confidence of healthcare

personnel on the significance of reporting and how processes work. This implies that providing continual education aimed at the different characteristics of disciplines is worthwhile in enhancing patient safety.

Perceptions of the Reporting System
The reporting system based on EHR that is used in the hospitals is met with a mixture of reviews by the participants which when combined provide both the good and bad aspects of it. There are users of the reporting tool who claim the system is user-friendly, while others say it is very intricate and lengthy. Looking at this, it can be said there is a need for user-friendly design in the reporting tools because it looks like there are some aspects which are complicated for some people.
There was worry too about the absence of a response on the reports lodged Virginia. It was felt by the participants that they are overly detached from the reporting activity when there are no follow-ups on the results of the reports submitted. This problem can be solved by introducing strong feedback systems automatic notifications on the reported incidents or regular discussions of the reported events to remind employees of the importance of reporting.

Multidisciplinary Collaboration
The results shed light on the significance of having clear roles and teams in enhancing the reporting processes. Being unsure of the responsibilities often resulted in needless unreported incidents, especially in care focused on teams. Written guidelines that specify roles and responsibilities should be able to fill this gap as well and ensure that all reporting is thorough.
The participants emphasized the importance of these meetings as learning experiences, including morbidity and mortality conferences, which facilitate interaction and teamwork across various specialties. These meetings are not limited to revealing the essence of the problem; they also help build the ethos of shared accountability in ensuring patient safety.

Implications for Practice
The conclusions of the study can be useful in achieving improvements of the adverse event reporting practices:
1. Interorganization System: Stressing Accurate Reporting: Reports should be regarded as learning opportunities and constructive criticism, rather than a source of conflict. This will require the active commitment of leadership in promoting a non punitive culture of wisdom.

2. Designing Comprehensive Reporting Structures: Redundant and unnecessarily complicated procedures only make the reporting process tedious for users.

3. Giving Reports: Commenting regularly on reported issues assists to sustain involvement and shows the relevancy of reporting.

4. Building Collaborative Framework: Regular training and cross discipline conversations may facilitate reporting culture and accountability.

Strengths and Limitations
The rest of this study is the qualitative approach which gives in-depth and personal accounts of the various healthcare professional's experiences and their encounters. Nevertheless, its implications are only relevant to one tertiary hospital and may not seamlessly extrapolate to other environments. Furthermore, although measures to protect confidentiality were taken, it is possible that social desirability bias affected self-reported data.

Future Research
Future comparative studies on multiple hospitals could determine what best practices exist to aid in the reporting of adverse events and then make these practices the standard protocol across facilities.

Future studies might also evaluate the effectiveness of the interventions, such as improved feedback systems and additional leadership courses, in the reporting behaviors over longer periods of time.

Conclusion

This paper provides a rich understanding of the intricacies involved in Event Reporting Adverse Events in a healthcare setting with numerous professionals. All barriers to compliance should be addressed and all the strangleholds should be tightened in order to improve the reporting policies, enhance the patient's safety, and create a relearning and responsible environment. Such observations are useful in developing effective methodologies to increase the level of engagement in reporting radiological adverse events and joint activity in complex systems of healthcare.

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