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Experiences of Nurses with Reporting Adverse Events at Ahafo-Ano North Municipal Hospital, Ghana

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Research Article

Keywords: adverse event reporting, patient safety, reporting culture, procedural oversight

Posted Date: March 19th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-8652612/v1

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Additional Declarations: No competing interests reported.

Abstract

Background and Aim

Adverse event reporting is crucial for patient safety, fostering accountability, and improving healthcare quality. Therefore, the study aimed to investigate the experiences of nurses in adverse event reporting, focusing on existing reporting systems, incidents reported, reporting outcomes, and the challenges nurses face in adverse event reporting.

Method

An exploratory-descriptive qualitative design was employed, utilising snowball sampling, and Braun and Clarke's reflexive thematic analysis was used to analyse the data gathered.

Results

The themes that emerged from the study included incidents, attitudes towards reporting, reporting systems, outcomes of reporting and challenges with reporting. Some subthemes included medication errors, procedural oversights, and patient falls. Nurses acknowledged the significance of reporting adverse events but encountered obstacles, including apprehension about being held responsible, hesitancy to disclose situations involving coworkers, and anxieties about potential legal consequences. These issues were made worse by the lack of institutional support and the absence of post-incident audits.

Discussion and Conclusions

There are vulnerabilities in medication processes and a fear of consequences in reporting adverse events. There is also significant reliance on verbal or oral reporting, indicating a prevailing mode of communication in adverse event reporting. This calls for targeted education and a supportive reporting culture, highlighting global underreporting concerns, legal and ethical challenges, and the need to adapt reporting systems to align with local sociocultural norms.

Introduction

Adverse events in healthcare, defined as unintended harm caused by medical care, remain a major challenge to patient safety and quality [1], [2], [3]. They often result from system failures and communication breakdowns [4] and can include medication errors, hospital-acquired infections, patient falls, radiation exposure, and counterfeit drugs. While patient safety initiatives aim to prevent and reduce risks during care [5], quality of care focuses on efficiency, timeliness, and patient-centeredness [6]. Despite progress, barriers such as fear of blame, stigma, and systemic obstacles continue to hinder the reporting of adverse events [4], making it difficult for health systems to learn from mistakes and prevent recurrences.

The World Health Organisation reports that one in every ten patients suffers harm while in hospital care, with unsafe practices like medication errors, surgery-related complications, and unsafe transfusions leading to millions of preventable deaths each year [7]. Issues such as wrong-patient identification or incorrect-site procedures occur at alarming rates, while unsafe injections alone account for 9.2 million years lost to disability and death globally [5]. These harms extend beyond patients, affecting families, healthcare providers, and public trust in health systems. Recognising their severity, reporting adverse events is critical to strengthening systems and ensuring safer care [5].

Adverse events affect three groups: patients and families, healthcare professionals, and healthcare institutions. Patients experience direct harm, while healthcare providers often become “second victims,” suffering guilt, shame, sadness, and grief that can disrupt both personal well-being and professional practice [8], [9]. Healthcare organisations themselves may also face crises and long-term reputational challenges [10]. Around 30% of providers report second-victim suffering, with many experiencing psychosocial or physical symptoms [9], [11]. A culture of blame and lack of support can worsen these effects, discouraging staff from speaking up about safety concerns.

Reporting is vital for learning, resource allocation, and improving healthcare quality [12]. Yet, healthcare workers often hesitate due to fears of litigation, professional sanctions, embarrassment, or lack of confidence [13], [14]. In Ghana, reporting remains limited, with data largely focused on Adverse Events Following Immunisation (AEFI) [15]. Studies show that although 69.9% of healthcare workers reported experiencing an adverse event in the past year [16], little is known about the experiences of nurses, who are central to patient care. This study, therefore, seeks to explore the experiences of nurses in reporting adverse events at Ahafo Ano North Municipal Hospital in Tepa, Ghana, to identify barriers and inform strategies for fostering a stronger culture of safety.

Methods

Study Design

This study employed an exploratory descriptive qualitative design (EDQ) to examine and explain the phenomenon [17] providing a comprehensive account of the problems or occurrences as reported by participants [18]. EDQ research is a practical approach that facilitates the resolution of specific and valuable "what" inquiries, such as those explored in this study [17]. This design is preferred due to its ability to capture meaningful aspects of real-world occurrences [18] and enhance our understanding of the experiences of nurses reporting adverse events.

Study Setting

The study was conducted at the Ahafo Ano North Municipal Hospital in Tepa, Ghana, a newly constructed facility with a bed capacity of 100 and a nursing staff of 160. The hospital was selected for

its modern equipment and its role as a teaching and training hospital for Nursing and Midwifery Training College-Tepa, emphasising clinical attachment training for student nurses and midwives.

Study Population

The study population was nurses of various categories and ranks who worked at the Ahafo-Ano Municipal Hospital.

Inclusion and Exclusion Criteria

The study included nurses with personal experience reporting adverse events or witnessing incidents, and those with at least five years of clinical experience. Exclusion criteria included those with less than five years of experience, rotation nurses, and midwives, as well as those who had neither experienced nor reported adverse events. Experience was crucial in reporting such incidents.

Sampling Technique and Sample Size

The study used purposeful and snowball sampling techniques to gather data on nurses' experiences with adverse event reporting. Purposeful sampling, based on the researcher's expertise, was chosen for its depth and quality of information [19], [20]. Snowball sampling, on the other hand, used existing participants to identify potential informants, allowing for a more comprehensive understanding of the phenomenon [21]. Data saturation, a point in qualitative research where new information ceases to emerge, was achieved by continuously reviewing and analysing the collected data [22], [23].

Data Collection Tool and Procedure

This study employed semi-structured interviews as the primary method for data collection, with a comprehensive guide developed to facilitate the qualitative data collection. The guide aimed to understand and justify experiential phenomena, making it a potent qualitative research technique [24]. The guide (see Supplementary File 1) was developed through a literature review, consultations with experts, and feedback from academic supervisors and peers. A pilot test was conducted with two nurses to ensure clarity and appropriateness. Participants were recruited through direct contact with nursing in-charges, personal approaches, and referrals from familiar nurses involved in adverse event reporting. Informed consent was obtained, and English was used for communication. Open-ended questions allowed for flexibility in exploring emerging themes. Field notes were taken during interviews to capture non-verbal cues and contextual observations. Audio recordings were made to accurately represent participants' responses and transcribed verbatim for subsequent analysis.

Data Management, Processing, and Analysis

The study used a manual data management procedure, pseudonymizing participant data during transcription. Word-for-word interviews were meticulously recorded, with expert translators conducting back-to-back translations. Data was securely stored on a password-protected computer and a password-protected flash drive, including audio recordings. The Committee on Human Research, Publications, and Ethics mandated data retention for five years before removal from all storage devices.

The study utilised the thematic analysis approach, as described by [25], to identify, categorise, and gain insight into patterns of significance within a dataset. This method offers clarity in a research process that may seem unclear or complex. Thematic analysis guides the structured coding and interpretation of qualitative data, which can be linked to broader theoretical or conceptual challenges. The research process involves six phases: 1) Familiarising oneself with the data, 2) Generating initial codes, 3) Searching for themes, 4) Reviewing potential themes, 5) Defining and naming themes, and 6) Producing the report. The researcher engages with the data through a thorough examination of textual materials, audio recordings, and video data, taking notes and organising relevant elements. Thematic analysis helps in identifying overarching concepts and encapsulating significant aspects of the data in relation to the research question. This approach is particularly important for inexperienced researchers working with large datasets.

Trustworthiness

[26] stated that trustworthiness is the correctness (soundness), adequacy, and methodological soundness of the study investigation. This was achieved by employing the five criteria: credibility, transferability, confirmability, authenticity, and dependability [27]. Credibility was ensured by using gentle prompts, short verbal cues, and clarifying questions to better understand what participants meant in their responses. To ensure accuracy and capture every detail, all conversations were recorded with an audio device, allowing the researcher to collect reliable data without missing important information. Transferability was obtained by ensuring comprehensive descriptive data were included, which involved collecting a wealth of detailed information about the techniques and background relevant to the study. To uphold dependability, the study employed the six-step thematic analysis framework introduced by [25]. To ensure confirmability, the researcher asked for clarification on any confusing or misleading responses from the respondents.

Ethics approval and consent to participate

The study received approval from the Committee on Human Research, Publication and Ethics (CHRPE) at Kwame Nkrumah University of Science and Technology (Ref: CHRPE/AP/369/23). Administrative approval was also granted by the management of Ahafo-Ano North Municipal Hospital. We conformed to the Helsinki Declaration and other guidelines of ethical conduct in research on humans. All the participants signed the consent form before the investigation took place. Anyone was free to choose whether to take part in the study, while they were guaranteed confidentiality and anonymity, and knew that there would be no negative consequences if they decided to withdraw from any stage in the study.

Results and Discussions

Socio-Demographic Background of Respondents

Six respondents, each assigned a pseudonym, have diverse backgrounds in the nursing profession, ranging from 32 to 38 years old. They hold various ranks, have varying educational qualifications, and have 9 to 16 years of professional experience. This socio-demographic description provides a comprehensive background for interpreting the findings and insights derived from thematic analysis.

Table 1: Socio-Demographic Profile of Respondents

	Pseudonym	Sex	Age	Rank	Education	Experience
1	Respondent 1	Male	37 years	Principal Enrolled Nurse	Certificate	9 years
2	Respondent 2	Female	36 years	Nursing Officer	Diploma	10 years
3	Respondent 3	Male	32 years	Nursing Officer	Bachelor's degree	10 years
4	Respondent 4	Male	37 years	Nursing Officer	Bachelor's degree	10 years
5	Respondent 5	Female	38 years	Senior Nurse Officer	Bachelor's degree	15 years
6	Respondent 6	Male	38 years	Principal Nursing Officer	Bachelor's degree	16 years

Source: Field Data, 2023

Note: Professional ranks reflect Ghana Health Service designations.

Table 1 presents the socio-demographic characteristics of the study respondents, including sex, age, professional rank, levels of education, and years of experience.

Theme and sub-themes

The thematic analysis yielded five predominant themes with accompanying sub-themes which reflected nurses' experiences with adverse event reporting.

Table 2: Themes and sub-themes

Theme	Sub-themes
Incidences	1. Medication errors 2. Procedural oversight 3. Patient falls
Attitudes towards reporting	1. Recognition of reporting importance 2. Emotional and institutional barriers 3. Selective reporting based on perceived impact
Reporting Systems	1. Incidence report book 2. Significant reliance on verbal reporting
Outcomes of reporting	1. Lack of post-incident audit 2. In-service training 3. Legal and ethical implications
Challenges	1. Tendency to settle issues amicably 2. Fear and blame 3. Organisational and professional consequences

Source: Author's Construct, 2023

Table 2 summaries the main themes and corresponding sub-themes that emerged from the reflective thematic analysis.

Incidents of Adverse Events

Medication Errors and Adverse Drug Reactions

As the third most common cause of death even in advanced settings as the US [28], the following prevalence of adverse events confirms studies such as [29], [30], [31]. A significant theme of medication errors and adverse drug reactions emerged from the interview data. Respondent 1 highlighted flaws in drug delivery procedures by sharing an event involving a student nurse's mistake in administration:

"One experience I could recount is when a student nurse gave Diclo IV instead of IM. He was supposed to draw the drug and hand it to me to administer. He, however, went ahead to administer immediately without instructions."

This event made it clear how dangerous it can be to administer medications incorrectly and how crucial it is to follow the right procedures. The need to take prompt corrective action was underlined by reporting the occurrence to the physician assistant and warning the student:

"We reported to the physician assistant on duty, who suggested we give the patient normal saline to avert a cardiac arrest. The student was called to the nurse's station. He was warned to ensure the practice is not repeated."

However, a lack of adverse event reporting training raised questions about healthcare practitioners' general level of readiness: *"I don't think the reporting process is difficult. We have not had any training on adverse event reporting."*

Respondent 2 recounted an incident involving adverse drug reactions during IV medication administration:

"I was administering an IV medication for a patient at OPD, and in the process, the patient started complaining of itching palms and rashes on the skin, so I immediately stopped and reassured the patient that I would do my best to make her comfortable."

Dedication to patient safety was demonstrated by the timely stopping of medication administration and discussion with the doctor. The hydrocortisone prescription and the following observation showed that the nurse understood the essential steps to handle adverse drug reactions:

"I put her to bed, rushed to the prescriber on duty, and informed him of the situation. He also prescribed hydrocortisone for me to administer. I administered it to the patient and observed for about an hour."

But past instances of pharmaceutical errors during injections were also emphasised, highlighting the necessity of ongoing education and advancement in medication delivery techniques:

"One happened when we were at the old hospital. It was also an injection. After giving, I realised the patient was dizzy and going off. It was my first experience, so I immediately called my in-charge."

Respondent 5 revealed an instance in which a co-worker gave clindamycin to the patient in error, causing palpitations, and highlighting a knowledge gap about correct drug reconstitution:

"Someone gave clindamycin. She told me she didn't know the amount she was supposed to mix with aqua. She added only 2mls of aqua coincidentally." We initially hesitated in utilising formal reporting mechanisms: "we later told our in-charge".

Respondent 6 related a touching story about a young patient, including the moment of realisation, the creation of an incident log, and the conversations that followed with hospital administration: *"So management also organised a meeting with the ward about what had happened."* This quote offers insight into organisational reactions and managerial conversations following a drug error affecting a vulnerable group.

Respondent 5 disclosed a significant knowledge void that led to the improper dispensing of clindamycin*: "Imagine if we reported in writing. The nurse would have had to explain how she didn't know she needed to mix it with 40mls of aqua."* This quotation emphasises the reluctance to disclose due to gaps in knowledge and fear of possible repercussions. In another instance involving a sick child, a nurse administered the medication by error, which had regrettable results:

"During the night shift, I had to give a sick child antibiotics. After I gave the medicine, within just a minute, the child's mom rushed to the nurses' station, worried that something was wrong with the baby."

Soon after taking the wrong medication, the toddler died despite efforts to save him. The nurse, who was not aware of the error at first, got emotional assistance: *"They gave me a break and filled out a report about what happened that night."* When the incident was brought to the attention of the hospital's management, the nurse manager called a meeting to address what had happened: *"The next morning, I told the nurse manager what happened. She talked to me and informed the higher-ups. They called a meeting to discuss what had happened."*

The widespread occurrence of medication errors supports the [5] estimate. This is also validated by surveys in Ghana conducted by [31], [32], which identified adverse medical events among healthcare professionals. Similar findings are reported in studies from other settings [33], [34], [35].

Procedural Oversight

Another important trend regarding equipment-related adverse events, particularly in the surgical setting, was identified through the examination of interview data. Respondent 3 from the operating room related an emotional account of how electrosurgical equipment was positioned during a procedure:

"I work at the theatre, so a patient had burns and fell, which came as a result of the wrong placement of the electrosurgical units. It was my first time, and unfortunately, the placement was not done well."

The patient suffered burns because of a procedural error, emphasising the significance of correct placement. Respondent 3, who was personally involved, stressed the importance of communicating procedural problems promptly:

"The verbal reporting experience was okay. I told my supervisor about the event and explained the need to orally report after the written report. She asked me what had happened, and I described what happened. That was all. There was no difficulty at all."

An additional instance that led to a procedural mistake concerned an intoxicated patient who fell following a cannula dislodgment. Respondent 4 went into detail about the events that transpired, highlighting the difficulties encountered throughout the patient's attempted resuscitation that ended in death:

"After the 10 o'clock medication, they were made to relax and sleep. Around 11, a client called me to say that he wanted to go out and urinate. He was on infusion, so he asked me to remove it so he could visit the washroom. After visiting the washroom and walking closer to his bed, he fell."

This event emphasises the possible dangers of providing patient care during procedures and emphasises the necessity of careful supervision, especially in situations when patients may be vulnerable because of outside influences like alcohol drunkenness.

Medication administration is included in the scope of procedural oversight, which goes beyond physical operations. One particularly noteworthy example involves a paediatric patient who tragically died because of a drug error. Respondent 6, who was personally involved, gave a thorough explanation of the events that led to this regrettable result:

"During the night shift, this nurse was supposed to administer an antibiotic medication. She administered the drug, and shortly afterwards, within one minute of administration, the mother shouted and brought the child to the nurses' station, screaming that something had been done to the baby and the baby was dying."

This event highlights systemic problems that need to be addressed by showing the relationship between prescription mistakes and procedural oversight. These findings about the prevalence of incidence, including patient falls and procedural oversight, confirm [36] finding that patient falls and problems with healthcare technology, devices and equipment are common adverse events.

Patient falls and Complications

Patient falls have been confirmed in many studies [33], [34], [35], [36], [37], [38]. Respondent 4 provided an insightful story of a heartbreaking event involving an intoxicated patient, emphasising the difficulties encountered when working the night shift: "It was a client who came in with alcohol intoxication. He was in a withdrawal state. After taking over, we went ahead and prioritised the needs of the clients." The patient's request to use the bathroom started the sequence of events that led to the cannula dislodgment and subsequent collapse:

"After the 10 o'clock medication, they were made to relax and sleep. Around 11, a client called me to say that he wanted to go out and urinate. He was on infusion, so he asked me to remove it so he could visit the washroom. After visiting the washroom and walking closer to his bed, he fell. We tried to resuscitate him, but he died. We called the morgue attendant who was around and reported it in the incident report book."

But the absence of a request for an audit and the lack of details regarding the ensuing inquiry cast doubt on the openness and possibilities for learning that accompany similar incidents*:*

"Afterwards, I didn't ask about anything again. There was no call for an audit. What I know is that there was supposed to be a death audit to ascertain the events leading to the death."

Respondent 3 revealed an additional noteworthy instance that involved burns that were caused by the incorrect positioning of electrosurgical devices during surgery, emphasising the consequences of procedural errors:

"I work at the theatre, so a patient had burns and fell, as a result of the placement of the electrosurgical unit. It was my first time, and unfortunately, the placement was not done well."

The incident underscored the potential harm caused by procedural errors, emphasising the importance of reporting and communication in mitigating such risks:

"The verbal reporting experience was okay. I told my supervisor about the event and explained the need to orally report after the written report. She asked me what happened, and I described what happened. That was all. There was no difficulty at all."

Other adverse events that were neither prevalent nor reported include violence [34]; delayed or ineffective treatment and prescription mistakes [37]; blood transfusion errors and intravenous fluid errors [31], [32]; nosocomial infections [39]; diagnostic errors, failure of medical devices [36]; injuries, wounds, fractures, and dislocations [35].

Attitude towards Reporting Adverse Events

Recognition of Reporting Importance

Even in areas where it is legally mandatory, less than 5% of adverse events are reported [40]. The attitude of nurses toward reporting adverse events is negative in the literature [41], [42]. Other studies [43] showed higher awareness of reporting but low actual reporting. The need to report adverse events in the hospital context was repeatedly emphasised by the participants. This acknowledgement as a group is based on a strong awareness of the influence on patient safety and gaps in knowledge among colleagues. Respondent 1 underlined the need for reporting by saying, *"It is important to report adverse events because some of our colleagues may not know the route of administration of some drugs. For me, I think it's good to report*." This statement demonstrates a strong sense of accountability and an understanding that, should unreported adverse events occur, there may be unforeseen repercussions because of a lack of knowledge among healthcare professionals. Respondent 6's sentiment highlights how serious this subject is even more:

"An adverse event is something that is important and should not be overlooked. I think for me, when we report an adverse event, it helps the institution to build upon the lapses at the ward to prevent them from further occurrence."

Here, the focus is on both the larger institutional framework and personal accountability. It is believed that reporting unfavourable incidents might spur organisational development. The concept is based on a dedication to improving overall patient care and correcting systemic flaws. This finding confirms literature on the attitude towards reporting adverse event which indicates that reporting is highly

dependent on institutional and personal cultures and the perception of the occurrence [16]; ethical beliefs; professional responsibility [44]; and cooperation [30].

Emotional and Institutional Barriers

The research participants offered intricate perspectives on the interaction between emotions and organisational obstacles related to disclosing unfavourable incidents. Respondent 3 provided an honest assessment of the emotional setting, recognising the existence of dread and reluctance:

"Sometimes we are afraid of what is going to come out of what we are going to report. Sometimes, we also fail to take responsibility. After all, it happened, and it was as a result of the work we were doing, so there is no need to report."

This candid acknowledgement highlights the complexity of the emotional obstacles that nurses face when thinking about reporting unfavourable incidents. It also confirms the assertion of [44] that nurses have a higher propensity not to report adverse events than doctors because they regard them as incidental and perhaps expected. A complicated psychological struggle is produced when fear is combined with the belief that reporting is not necessary. Respondent 6 went into further detail about their initial hesitation and offered an insight into the emotional dynamics that accompany reporting:

"Initially, I didn't like it because it sounded like I was reporting my colleague, and I would be partially blamed for anything that could happen to my colleague, but then I felt I was doing the right thing, so that alone motivated me to proceed with the reporting."

This detailed description captures the inner struggle that nurses have when they are caught between the internal belief that reporting is morally required and the possibility of being held accountable. It also highlights the internal tensions that could prevent healthcare settings from developing a strong reporting culture. This is highlighted by [45] finding that a significant percentage of nurses never reported medication reactions. The concerns of the perceptions of colleagues also confirm the role of cooperation as found by [30], [46] in improving the reporting culture.

Selective Reporting Based on Perceived Impact

According to the literature, reporting is challenged by the reality that most healthcare workers perceive most adverse events as incidental. Despite the recommendation of adverse event notification tools, they were underutilised and underreported [47]. This is contrary to [48] finding that most professionals reported adverse events. Nurses have been found to take a varied approach to reporting adverse events, with a propensity to report incidents selectively depending on how serious and impactful they believe them to be. Important details about this selective reporting approach were provided by respondent number five:

"I wouldn't report events like passing the line with a patient and getting infiltration. But other critical issues like a blood transfusion or adverse drug reaction, or a patient falling from bed are mostly

reported."

This viewpoint suggests a risk-stratified reporting approach, where nurses prioritise reporting events that are considered more critical or have a higher potential for harm. The distinction between routine occurrences and those with substantial consequences becomes apparent through this selective reporting behaviour. Supporting this notion, Respondent 2 emphasised the importance of informing higher authorities about specific occurrences: *"I also have to inform a higher authority or even my colleague about the happening. Then we also take action to prevent that from happening again."* This quote not only reinforces the concept of selective reporting but also highlights the proactive stance taken by nurses to prevent the recurrence of adverse events through reporting.

Adverse Events Reporting Support Systems

Complexities in the Reporting Process and Institutional Support

In addition to the disparities in institutional support, the complexities involved in the adverse event reporting procedure are presented and discussed. Respondent 1 shed light on the details by highlighting the necessity for secrecy and the fear of being held accountable*: "Reporting means giving yourself out. So it's good not to tell anyone... I don't think it's a difficult process to report."* Respondent 3 highlighted the importance of clear communication channels and support mechanisms for new staff: *"Sometimes there is support, other times there is no support... Sometimes the worry is what happens after reporting."* The absence of sensitisation and the need for improved reporting tools were underscored by Respondent 5 and Respondent 6, respectively: "*The attention is being paid to adverse drug reaction only... The rest are mostly not reported,"* and *"For quite a long time, we haven't had any workshop on how to report adverse events... I think we can improve upon them."*

Support Systems and Reporting Infrastructure

Information about the degree of institutional support and the experiences respondents had with reporting procedures also emerged. This confirms [49] finding that the first point of the report is the nurse coordinator, either verbally or in writing. Respondent 1 outlined the routes and difficulties that now exist:

"There is a channel of communication, so I report to my in-charge, who will also report to the matron... The computer is very fast. At first, the in-charge will take the book to the matron's office before she knows what is happening."

The need for proactive training and clear guidelines for new staff was emphasised by Respondent 3: *"I think new staff are supposed to be given training and guidelines on the right channels of communication... mostly, new staff are not aware of the channels of communication."* Contrary to what is found in the literature [50], there were no specified reporting systems, such as the Intensive Care Unit Safety Reporting System as cited in the literature. The national voluntary event reporting system [51], [52]

was not found in the setting under study. More so, the voluntary electronic error reporting system appears to be nonexistent from the narrations of respondents.

Oral Reporting Versus Written Report

Respondents in the study consistently emphasised the preference for oral reporting over written documentation when it comes to adverse events. For instance, Respondent 1 highlighted, *"You write the patient details and address, among others. You sign, and you're in charge."* Similarly, Respondent 2 underscored the importance of verbal reporting, stating,

"The first thing you have to do if there is an adverse event is to ensure that you immediately handle the situation if it can be handled. After you report to a senior colleague on the award."

This oral reporting trend was echoed by Respondent 3, who noted, *"Sometimes the matron may not open the book for several months*. But for the LIMS, the matron can open any ward of interest and see what is going on there." Moreover, Respondent 5 highlighted the need for designated individuals in charge, stating, *"It'll be difficult for us to report if there is no one in charge of those things. I think we should show and give support to nurses."* This consistent emphasis on oral communication suggests a prevalent reliance on verbal channels in the context of adverse event reporting.

Outcomes of Adverse Events Reporting

Reluctance and Fear of Blame

According to nurses, there is a widespread reluctance to report unfavourable situations out of fear of being blamed or insulted. Respondent 1 expressed the following sentiment:

"By reporting, your colleagues are likely to blame it on your carelessness. Your colleagues will also advise you not to report. Maybe insults from higher authorities will also prevent me from reporting."

Respondent 5 reiterated this, sharing their initial hesitancy: *"Initially, I didn't like it because it sounded like I was reporting my colleague, and I would be partially blamed for anything that could happen to my colleague."* Respondent 6 also highlighted:

"Sometimes when you are going to report, some superiors are harsh. There is some kind of anxiety when you are going to report. You fear they may blame you for many things you didn't do right. Sometimes you feel so afraid of reporting."

These confirm reported outcomes in studies [36], [53], [54] which include shame, inadequacy, despair, bruised confidence, guilt, and ongoing insecure emotions.

Lack of Post-Incident Auditing

Respondent 4 revealed something significant: there were no post-incident audits: *"There was no call for an audit. What I know is that there was supposed to be a death audit to ascertain the events leading to the death*." Respondent 2 also commented on the lack of auditing: *"For me, it opened my eyes to a lot of things because after reporting to my supervisor, he educated me on how to go about it next time."* The need for post-incident audit is confirmed by the expectation of patients [55] after adverse events, among others, measures are taken to prevent the said incidents from repeating. As similarly posited by [56], early disclosure may calm patients down and reduce the propensity to sue.

Fear and Legal Implications

The complex reporting process and the worry of legal repercussions were identified as major obstacles (Respondent 6). Respondent 5 highlighted the anxiety that comes with reporting: *"Fear and the blame game and the way we handle issues prevent people from reporting... Sometimes the worry is what happens after reporting."* These concerns are confirmed in [53], [57] finding on post-reporting outcomes, which include fear of losing one's employment, fear of losing one's professional registration, and fear of facing disciplinary action. Respondent 2 shed light on legal implications: *"It was a medication error, and we knew the effect because the patient died. And this patient was also claiming she would take the matter up. So there were legal implications..."* Literature is divided on the legal implications of adverse event reporting. While some studies [36] posit that the fear of legal repercussions worsens the psychological impacts of adverse events reporting, others [58] indicate that reporting adverse events may give the healthcare institution legal safeguards.

Organisational Improvement and Cultural Shift

The consequence of unreported adverse events includes improved healthcare quality [9]. Liukka [9], however, admits that healthcare practitioners keep incidents a secret from patients and hence thwart the learning opportunities that could be gleaned. At the organisational level, the expected outcomes of reporting adverse events include analysis and creation of alternative therapies [7], [59], [60], [61], [62]. These were not fully confirmed in the study. Despite challenges, the narrations of respondents indicate that adverse events reporting catalysed organisational improvements. Respondent 6 highlighted the positive impact of protocols: *"The workshop and in-service training and the other things were implemented to prevent such an incident from happening*." Respondent 3 emphasised the organisational response*: "Our protocols became more robust after incidents were reported. It wasn't just about fixing the immediate issue but improving the overall system."* Respondent 3 shared a constructive verbal reporting experience: *"For me, it opened my eyes to a lot of things because after reporting to my supervisor, he educated me on how to go about it next time".* These point to some positive outcomes of reporting adverse events, which some studies, such as [63] confirm that increasing patient involvement in treatment reduces anxiety.

Challenges of Adverse Events Reporting

Challenge of Navigating Reluctance to Report with Colleagues

The reluctance to report adverse events due to fear of blame aligns with previous research [64] This fear aligns with the Theory of Planned Behaviour, where perceived behavioural control, influenced by the fear of blame, plays a key role [65], [66]. In the context of working with colleagues, a common issue emerged regarding the unwillingness to disclose negative experiences. Respondent 1 stated, "By reporting, your colleagues are likely to blame it on your carelessness. Your colleagues will also advise you not to report. Maybe insults from higher authorities will also prevent me from reporting." Respondent 6 shared their initial hesitation,

"Initially, I didn't like it because it sounded like I was reporting my colleague, and I would be partially blamed for anything that could happen to my colleague, but then I felt I was doing the right thing, so that alone motivated me to proceed with the reporting."

Personal and Professional Preparedness

The theme of personal and professional preparedness emerged as a crucial factor influencing nurses' experiences with adverse event reporting. Respondent 2 highlighted their prior experiences, stating, *"For me, there wasn't any difficulty because, in my line of work, I had encountered such experiences before, so I knew how to go about it."* Respondent 4 reinforced the importance of reporting and personal responsibility, stating,

"I always report happenings in the course of my duty to my superiors because you have to keep data. I always report by reporting exactly what happened. It is also important to report only the truth."

This resonates with studies emphasising the importance of healthcare professionals' prior experiences in facilitating incident reporting [67]. Respondents highlighting the significance of reporting and personal responsibility align with the Theory of Planned Behaviour, emphasising the role of attitudes and perceived behavioural control in shaping intentions [68].

Legal and Ethical Concerns

Legal and ethical considerations proved to be significant challenges for nurses in reporting adverse events, aligning with the literature on the fear of legal consequences [69]. Respondent 6 reflected on the legal implications, stating, *"It was a medication error, and we knew the effect because the patient died. And this patient was also claiming she would take the matter up.* So there were legal implications..." Respondent 2 emphasised the importance of reporting to mitigate legal consequences.

"I think it is important to report because if we don't report, it can cause harm to the patient, and you will be in trouble if the patient decides to sue you. So I think reporting is the best way to exonerate yourself in the event there is a lawsuit."

Emotional and Administrative Burden

One recurring subject was the psychological and administrative strain of reporting bad events. Respondent 6 expressed feelings of being overwhelmed, noting,

"Yes, I was overwhelmed because apparently, I had to come to this place here and there, move up and down. Any time they call me to come and answer questions, put this down, answer these queries."

Respondent 3 shared insights into the stressors,

"The technicalities have to do with me walking to my boss's office with the incident book, so I didn't have many technical issues. When it comes to reporting adverse events, it is always difficult to get the truth."

The emotional and administrative burden identified in this study converges with research highlighting the overwhelming nature of incident reporting [70]. The stressors associated with the reporting process align with existing literature on the need for comprehensive analysis and support structures [42]

Cultural and Organisational Context

The obstacles that nurses faced when reporting adverse events were greatly impacted by the larger organisational and cultural context. Respondent 3 emphasised the tendency in the culture to resolve conflicts amicably, saying,

"When it comes to reporting adverse events, it is always difficult to get the truth. Some do want to conceal the information about what happened because of the harm or negative implications they might suffer, like any sort of punishment."

Respondent 6 provided additional context: *"The workshop and in-service training and the other things were implemented to prevent such an incident from happening."*

Staffing Level and Time Constraints

[15] emphasised overworking and its potential contribution to adverse events. Beyond the commonalities that were recognised, specific challenges identified included workforce levels and scheduling limits. Respondent 6 brought up the staffing concerns, pointing out,

"With the staffing level, we were three staff on duty on that day. The hospital itself was understaffed with nurses. So this nurse, to some point in time, I felt it was as a result of overworking that led to that act."

Respondent 6 also highlighted the time constraints and associated stressors, *"So I was overwhelmed initially. And when they were making plans to prevent this from happening, I was the same person they were pulling me up and down, do this, do that."*

Conclusion

The study concludes that there are vulnerabilities in medication processes and a significant hesitancy in reporting, rooted in concerns about potential consequences. There is also a complex interplay between reporting practices and organisational culture backed by barriers such as fear of blame and punishment. The deficiencies in current adverse event reporting systems align with global concerns of underreporting. The outcomes of adverse event reporting show a distinct context, reflecting both reluctance and positive learning experiences among nurses. Legal and ethical challenges associated with reporting, coupled with the absence of post-incident audits, underline the complexities in the reporting process. The study suggests that while adverse events are not consistently documented in written reports, this doesn't necessarily mean non-reporting. It suggests adapting reporting systems to Ghanaian cultural norms for better effectiveness.

Recommendations

The study suggests that Ghana's surgical settings should prioritise strict adherence to procedural guidelines. Also, healthcare facilities should collaborate with the Ministry of Health to develop protocols and support systems for night shifts, ensuring transparency and learning opportunities. Nursing education should include modules on adverse event reporting, and the curriculum should include learning activities like case studies and simulations. Ethical and legal considerations should be included in nursing education courses. The Ministry of Health and healthcare facility leadership should dismantle barriers to supportive reporting. Continuous learning and post-incident audits are also essential for improving patient safety.

Future research could investigate the efficiency of adverse event reporting systems in Ghanaian healthcare settings using a mixed-methods approach. This may include surveys and interviews with nurses to understand barriers and strengths. Longitudinal studies could also examine the impact of positive learning experiences from reporting. Legal and ethical challenges may be explored, including interventions to shape organisational culture. The relationship between staffing levels and adverse events could also be examined in future studies.

Declarations

Funding

The authors declare that no specific funding was received for the research, authorship, or publication of this manuscript.

Conflict of Interest / Competing Interests

The authors declare no competing interests concerning the work presented in this manuscript.

Availability of Data and Materials

The transcripts, codes, and themes generated and analysed during the current study are not publicly available due to privacy and confidentiality considerations. However, reasonable requests for data sharing can be directed to the corresponding author.

Code Availability

Not Applicable.

Author's Contribution

D.A.E. and V.M.D. conceptualised the study and developed the study protocol. D.A.E. led participant recruitment and data collection. D.A.E. and M.B.U. Conducted data management, coding, and thematic analysis. V.M.D. and M.B.U. contributed to the interpretation of findings and critically reviewed the methodological and analytical approach. D.N.E. supported manuscript drafting and contributed to the refinement of the results and discussion. All authors contributed to drafting and revising the manuscript and approved the final version for publication

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