



Research Article

DOI: 10.36959/545/411

Factors Influencing Reporting of Medical Errors Amongst Nurses in Pediatric Wards in Three Teaching and Referral Hospitals in Nairobi Kenya

Jane N Ngivu *, Carol Kawila Kyalo and Lillian Muiruri

Department of Health Systems Management, Kenya Methodist University, Kenya



Abstract

Service delivery is among the six health system strengthening pillars by World Health Organization. Successful health services bring about effective, quality, safe, personal and non-personal health care actions or interventions to those who need them, where they need them and when required with minimal resource wastage. Medical error is unintended commission or omission or the failure of an action which was planned which cause, or have potential to cause patient harm. It is a leading challenge in service delivery today and the incidence rates are an emerging international concern. Medical errors are underreported today, yet reporting helps in implementing measures which help prevent recurrence thereby enhancing patient safety and reducing harm and suffering. This study aimed at determining factors influencing reporting of medical errors amongst nurses in paediatric wards in three teaching and referral hospitals in Nairobi Kenya. The specific objectives of the study were to establish if nurses' knowledge on medical errors reporting influences reporting of medical errors, to establish if management support for medical errors reporting influence the reporting, to establish if medical error reporting systems influence reporting of medical errors and finally to establish if organizational safety culture influences reporting of medical errors, all these, amongst nurses in three teaching and referral hospitals in Nairobi Kenya. The study was cross sectional and utilized both quantitative and qualitative approaches in data collection. The target population comprised of 195 nurses; from Aga Khan University hospital Nairobi, Gertrude's Children's Hospital and Kenyatta National Hospital, all in Nairobi Kenya. Sample size was 131 nurses and response rate was 88%. Quantitative and qualitative data was collected from the nurses using a pretested questionnaire. Key Informant Interview Guide was utilized to collect qualitative data from three nurse managers. Data was coded and analysed using SPSS version 25 and presented in form of charts and graphs. Bivariate analysis showed that nurses' knowledge on medical errors ($p < 0.039$), management support on reporting ($p < 0.031$), and medical errors reporting systems ($p < 0.002$), all had significant association with reporting medical errors in the three facilities. Organizational safety culture however did not, ($p = 0.623$). This study recommends that nurses' knowledge and understanding of medical errors be promoted through trainings; starting from college and university levels and later during orientation and in-service. Management to disseminate policies and procedures to staff in their health facilities and ensure the same is well understood and implemented correctly. In addition, feedback about changes put into place based on those errors need to be communicated to staff in a timely manner. Additionally, just culture need to be embraced and cultivated to ensure objective approach to medical errors. Finally, medical error reporting systems to be simplified, made readily accessible and should have capabilities for anonymous reporting.

Keywords

Medical errors, Nursing, Patient safety, Paediatric, Reporting

Introduction

In an effort to improve health outcomes, the World Health Organization (WHO) developed a framework for action to strengthen health systems. This framework has a total of six pillars which are; health workforce, service delivery, Health financing, Health Information, leadership and governance and finally medical products, vaccines and technologies [1]. Good health services, as are those which ensure delivery of effective, quality, safe, personal and non-personal health care interventions to those people who need these services, when

***Corresponding author:** Jane N Ngivu, Department of Health Systems Management, Kenya Methodist University, Kenya

Accepted: March 14, 2022

Published online: March 16, 2022

Citation: Ngivu JN, Kyalo CK, Muiruri L (2022) Factors Influencing Reporting of Medical Errors Amongst Nurses in Pediatric Wards in Three Teaching and Referral Hospitals in Nairobi Kenya. J Nurs Pract 5(1):398-405

they need them and where they need them, with minimal resource wastage [1]. Health service delivery should be safe and of good quality.

One of the key challenges to quality and safe service delivery today is medical errors. They are among the leading causes of mortality in the USA [2]. Medical error is an act of omission or commissions which was not intended, or that which does not achieve the outcome which was intended. It is also defined as the failure of an action which was planned not being completed as planned or use of a wrong plan to achieve an aim [3].

The incidence rates of medical errors are an emerging international concern and the biggest challenge in their management is underreporting [4]. Reporting of medical errors is basic factor in patient safety improvement. It creates an excellent avenue for learning from such errors [4]. Medical error reporting is very important tool in the development and maintenance of risk awareness in health care organizations [5].

Medical Errors is classified as the third in position on causes of mortalities in United States of America (USA) hospitals. This is after cardiovascular diseases and cancer [3]. It is estimated that the burden of medical errors is much higher in Africa. Makary and Daniel highlight that if a country like USA with abundant resources channelled towards the medical sector, can record such a high rate of medical errors, then low and middle income countries must be more vigilant and ready to put measures in place to reduce the risk of medical errors [3].

Children are affected by medical errors at a greater risk than adults. When it comes to medication errors for instance, children are affected more by these errors than adults. This is largely because of their dependency on care givers and parents. It is also due to their different medical conditions and their age related complexity in dose calculations. Strategies to reduce some medical errors for example blood stream infections are more tailored towards adults and they are not as effective in children. For medication errors, many medication error computerized systems are more designed towards adults as opposed to children [6].

In the USA, medical errors underreporting is estimated to be between 50% and 96% [7,8]. Among children in the USA, medication error was up to 2.96% among admitted children [6]. In another study, admitted children were found to be at a great risk for adverse events with the incident rate going up to 11% of all admissions [9]. A trigger tool was utilized to detect medical errors in a pediatric academic medical centre. The tools revealed a medical error rate of 4.8%. This is against a reporting rate of only 1.2% [9].

In England, medical errors perceived as simple are reported in 22% to 39% of the times while those which are more serious many a times usually end up being unreported [4]. In a study done in Nigeria, only 30% of the participants said they frequently report medical errors [10]. In Ethiopia, reporting of medication error among nurses was at 57.4% [11] and in a study done in Uganda on medication errors, only 47% of participants acknowledged that they had reported medical errors, either committed by them or witnessed being committed by others [12].

In Kenya, many medical errors go unreported. In a study done in Aga Khan University Hospital Nairobi (AKUH-N), error rate when calculated using the reported incidents was low at 0.03% however when the researchers did a medical records review to look out for medical errors, the rate was higher at 1.4% showing that some of the errors found on medical record review had not been reported [13]. In Gertrude's Children's Hospital (GCH), a report generated in 2017 showed that 70% of medical errors were being reported by pharmacy staff. Nurses, despite being the bulk of the staff and in direct contact with patients 24/7 reported only 13% of the errors. (Gertrude's Children's Hospital Quality Reports, 2017). Kenyatta National Hospital (KNH) has similarly been in the news for medical errors however there is no data in the public domains on the rate of medical error reporting rate in the facility.

This study aimed at establishing the factors influencing reporting of medical errors amongst nurses in pediatric wards in these teaching and referral hospitals in Nairobi County (KNH, GCH and AKUH-N). Focus was on nurses' knowledge of medical errors, management support for medical errors reporting, medical error reporting systems and organizational safety culture and if these influence medical errors reporting.

The objectives of the study were, 1). To establish if nurses Knowledge on medical errors reporting influences the reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi County. 2). To establish if management support for the reporting of medical errors influences reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi County. 3). To establish if medical error reporting systems influences reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi County. 4). To establish if organizational safety culture influences reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi Kenya.

Materials and Methods

This was a cross-sectional descriptive study, and utilized both quantitative and qualitative designs. Study sites were Gertrude's Children's Hospital (GCH), Aga Khan University Hospital Nairobi (AKUH-N) & the Kenyatta National Hospital (KNH), all in Nairobi County, Kenya. The study population comprised of nurses working in Pediatric wards, 195 nurses in total. Sample size was 131nurses and response rate was 88%. A structured questionnaire was utilized to collect data from nurses. A key informant interview (KII) guide was also utilized to obtain qualitative data from one senior nurse manager from each of the three hospitals. Data was analysed using SPSS version 25. Ethical approval was obtained from the Kenya Methodist university research and ethics committee. Research permits were also obtained from National Commission for Science, Technology and Innovation (NACOSTI), KNH Ethical Review Council, GCH Ethical Review Board and The AKUH-N Ethical Review Board. Informed consents were obtained from all study participants.

Results

Table 1: Reliability results.

| | Cronbach's Alpha | No of questions |
|------------------------------|------------------|-----------------|
| Nurse knowledge (Xi) | 0.717 | 13 |
| Management Support (Xii) | 0.810 | 11 |
| Organization Safety (Xiii) | 0.729 | 11 |
| Reporting systems (Xiv) | 0.704 | 7 |
| Reporting Medical Errors (Y) | 0.799 | 6 |
| Overall Reliability | 0.880 | 48 |

Table 2: Nurses social demographics characteristics.

| | Frequency (n) | Percentage (%) |
|------------------------------|---------------|----------------|
| Hospital of work | | |
| GCH | 35 | 30 |
| AKUH | 20 | 18 |
| KNH | 60 | 52 |
| Gender | | |
| Male | 27 | 24 |
| Female | 88 | 76 |
| Age Bracket | | |
| <30years | 44 | 38 |
| 31-35years | 31 | 27 |
| 36-40years | 20 | 18 |
| 41-45years | 8 | 7 |
| 46-50years | 3 | 3 |
| 50> years | 9 | 7 |
| Years worked at the hospital | | |
| <1year | 12 | 10 |
| 1-5years | 57 | 50 |
| 6-10years | 19 | 17 |
| 11-15years | 12 | 10 |
| 16-20years | 8 | 7 |
| 21years & more | 7 | 6 |
| Total | 115 | 100 |

Nurses' social demographic characteristics

Majority 60(52%) were from KNH, female 88(76%), were aged 40 years and below 95(83%), and had worked at the facility for less than 5years 69 (60%) (Table 2).

Nurses knowledge on medical errors reporting

Nurses seemed to understand medical errors well, majority agreed that nurses in their department knew what medical errors are 102 (89%) and had a clear understanding on what medical errors reporting is 99 (86%). This was supported by majority 75 (65%) who said that one should report the serious errors which lead to serious harm or death, the mild errors which cause minor harm and even the errors which are minor and which don't lead to harm. Nurses' training on medical errors was seen to be very relevant 112 (97%). Indeed, majority said that they had been taken through medical errors and how to report them at their places of work 90 (78%) more so during orientation 72 (63%) and not necessarily during their college training (Table 3).

These results are in agreement with the KII respondents who stated that their nurses' managers had knowledge on

management of reported medical errors and the managers are trained on how to report medical errors. ".....in a scale of 1-5, I would rate nurses' knowledge on medical error reporting at 4"K103 ".... they are trained and there is a process to guide them"K102.

For nurses to report medical errors, it is paramount they understand what medical errors are, what errors are reportable and how to report them. The results of this study are in agreement with Havens & Boroughs, (2000) [14] who mentioned that medical error reporters are more likely to report errors when they know what is to be reported, when to do the reporting and how to do these reports (Table 3).

Management support for the reporting of medical errors

Results on medical error reporting policies show that majority 104 (90%), said policies and procedures on medical error reporting exist in their hospitals, that nurses have access to these policies 89 (77%), and these policies are readily accessible to nurses in their health facilities 93(81%). It is clear that the medical error reporting policies and procedures are well understood by nurses in the hospitals 84 (73%).

On ways of addressing reported medical errors, majority 88 (77%) said that when medical errors are reported, the management acts promptly to implement corrective action. In addition, the management usually informs the nurses about medical errors in their department, 93 (81%). Majority 85 (74%) also said they are given feedback about changes put into place based on the medical errors reported. Majority 101(88%) said that they discuss ways to prevent medical errors from happening again.

On patients' safety priority, majority 107 (93%) agreed that the hospital management provides a work climate that promotes patient safety and that patient safety is a top priority for the hospital management 105 (91%). These results support why majority 64 (56%) disagreed with the statement that hospital management seems interested in patient safety only after patient harm happens.

The above results are in agreement with KIs who mentioned that the hospitals have policy and procedures for reporting medical errors, and these policies are disseminated to nurses for use. Compliance to policies is ensured through audits and surveys by the quality assurance department.

".....there are policies and procedures which are disseminated, including reporting forms. These policies are even accessible in clinical areas....." K103.

The findings of this study are in agreement with Kiguba et al. [12] who said that organizational leadership and support was critical in improving error reporting. Further this study finding agree with a study done in Saudi Arabia, where 55% of the nurses in the study indicated that there is need to have guidelines and procedures on medical incidents reporting, and that these should be clear and concise [15]. From this study finding its clear that the policies are easily accessible to all nurses in the facilities. This is in agreement with Vaismoradi,

Table 3: Descriptive statistics on nurse knowledge (n = 115).

| Statements | Agreed (%) | Disagreed (%) |
|--|------------|---------------|
| Medical errors are mistakes made by healthcare practitioners due to carelessness or failure to be keen. | 59(51) | 56(49) |
| Medical errors reporting is reporting colleagues who make mistakes so that actions can be taken against them | 20(17) | 95(83) |
| In medical error reporting, one should report the serious errors which lead to serious harm or death, the mild errors which cause minor harm and even the errors which are minor and which don't lead to harm. | 75(65) | 40(35) |
| Nurses in my department know what medical errors are. | 102(89) | 13(11) |
| Nurses in my department have a clear understanding on what medical errors reporting is. | 99(86) | 16(14) |
| I personally have a clear understanding of how to report medical errors | 99(86) | 16(14) |
| I received training on Medical errors when I was a student during my college/ university studies. | 67(58) | 48(42) |
| In my place of work, I have been taken through medical errors and how to report them. | 90(78) | 25(22) |
| Nurses are routinely trained on medical errors and error reporting as part of their induction upon hire. | 72(63) | 43(37) |
| Refresher trainings for nurses on medical errors and error reporting are routinely done in my hospital. | 66(57) | 49(43) |
| I have personally been trained on medical errors and error reporting process. | 76(66) | 39(34) |
| There is adequacy of nurses' training on medical errors | 63(55) | 52(45) |
| Nurses' training on medical errors is relevant | 112(97) | 3(3) |

Table 4: Descriptive statistics on management support for medical error reporting (n = 115).

| Statements | Agree (%) | Disagree (%) |
|--|-----------|--------------|
| Policies and procedures on medical error reporting exist in this hospital. | 104(90) | 11(10) |
| I have access to the hospital's medical error reporting policy and procedure. | 89(77) | 26(23) |
| Medical error reporting policies and procedures are readily accessible to nurses in this hospital. | 93(81) | 22(19) |
| Medical error reporting policies and procedures are well understood by nurses in this hospital. | 84(73) | 31(37) |
| When medical errors occur, we are given feedback about changes put into place based on those errors. | 85(74) | 30(26) |
| We are usually informed about medical errors that happen in my department. | 93(81) | 22(19) |
| In my department, we discuss ways to prevent medical errors from happening again. | 101(88) | 14(12) |
| When medical errors are reported, the management promptly acts on it to implement corrective measures. | 88(77) | 27(23) |
| Hospital management provides a work climate that promotes patient safety. | 107(93) | 8(7) |
| The actions of hospital management show that patient safety is a top priority. | 105(91) | 10(9) |
| Hospital management seems interested in patient safety only after patient harm happens. | 51(44) | 64(56) |

et al. [16] who said that policies have to be well disseminated to all users and there is need for a monitoring process that users are aware of the policies and are implementing the policies as it should be (Table 4).

Organizational safety culture

On reactions to reported errors, majority 69 (60%) felt that mistakes were not held against them, and that staff were not punished whenever they made medical errors 86 (75%). The respondent agreed that there is a learning culture on medical error reporting. Majority said that these hospitals are actively doing things to improve patient safety 113 (98%), that reported medical errors have led to positive changes in the hospital processes 108 (94%) and majority 107 (93%) said discussions are held on ways to prevent medical errors from happening again. On team work level, majority 106 (92%) said that people support one another and people treat each other with respect 106 (92%). Majority 100 (87%) also agreed that the hospital departments work together to provide the best care for patients.

These results are in agreement with the open ended responses. From the open ended questions, when respondents

were asked how else their organizations reacted to reported medical errors, out of the 115 respondents, 50 responded to this question. 31 (62%) said root-cause analysis is done to address contributing factors, 16 (32%) mentioned refresher training and staff education as well as patient education and reassurance, while 3 (6%) said policies and new measures are formulated and put in place to prevent recurrence of the medical errors.

When respondents were asked about the positive changes that had been implemented as a result of a reported medical error in their organizations, 68 out of the 115 responded to the question with 26 (38%) mentioning that there had been improved processes which led to improved performance, 19 (28%) said that new policies and guidelines had been made following reported medical errors, another 19 (28%) said there were quarterly audits introduced as well as increased staff education and awareness while 4 (6%) mentioned increased cooperation among the staff and also reduction in medical errors incidences.

Further the respondents were asked on the negative actions that had happened as a result of reporting a medical

error in their organizations and out of 115, 53 responded to the question. 31 (58%) said disciplinary actions such as dismissals, warning letters, statement writing and even being sued, 10 (19%) responded that victimization and working with fear of being victimized, 7 (13%) felt no negative action had been taken while 4 (8%) mentioned show cause letters.

A culture which fosters blame and punishment whenever a medical error occurs discourages reporting of medical errors and is a big threat to patient safety. The finding of this study are in agreement with Banakhar, et al. [15] and Sorra, et al. [17] who mentioned that culture of safety requires a commitment at the organizational level to detect and learn from errors (Table 5).

Medical error reporting systems

On availability of a reporting system, majority 107 (93%) agreed that there exists a medical error reporting system either in soft or hardcopy. And that this system is readily accessible to nurses in their departments 97 (84%). Majority 83 (72%) also said that the time taken to report a medical error is good enough. Majority 94(82%) accepted that medical error reporting system in their hospital was easy to use and that the system was very useful in the medical error reporting process 98 (85%). It is clear that the reporting system was not anonymous 72 (63%) neither was it confidential 66 (57%).

Results from the KIIs indicate that reporting systems have been put in place to improve medical errors reporting by nurses. For example, training nurses on how to report and undertake root cause analysis. In addition, there is online reporting software, online documentation and incidence

reporting forms. These reporting systems are accessible to all nurses.

“.....medical errors register is available, which acts as part of the performance contract targets....” KI03

“... when errors are reported, root cause analysis is done and a feedback is given on actions taken....” KI01 “..... when errors are reported root cause analysis is usually done, and actions to prevent recurrence are implemented. Continuous Medical Education and staff sensitizations are also undertaken....” KI03.

The results of this study indicate that the reporting systems lacks anonymity hence lacks confidentiality. This is not in agreement with Barach & Small, [8]. According to these authors the best way of ensuring confidentiality of the data and the medical error reporter is to have medical error reports filed anonymously (Table 6).

Reporting of medical errors

On frequency of reporting medical error, majority 74 (64%) said that they always report whenever they commit a medical error in their course of work. Slightly more than half 62 (54%) said that they would always report errors committed by someone else. Majority 71 (62%) reported that they would report a medical error which led to patient death or serious harm including disability, and that they would report a medical error which was corrected before even reaching the patient 71 (62%). Slightly more than half 67 (58%) would report a medical error which reached the patient but did not cause any harm.

Table 5: Descriptive statistics on organizational safety culture (n = 115).

| Statements | Agree (%) | Disagree (%) |
|---|-----------|--------------|
| Staff here feel like their mistakes are held against them. | 46(40) | 69(60) |
| Staff here are punished whenever they make medical errors | 29(25) | 86(75) |
| In this hospital, we are actively doing things to improve patient safety. | 113(98) | 2(2) |
| Medical errors made here in the past have led to positive changes in the hospital processes. | 108(94) | 7(6) |
| In my hospital, we discuss ways to prevent medical errors from happening again. | 107(93) | 8(7) |
| People support one another in my department. | 106(92) | 9(8) |
| When a lot of work needs to be done quickly, we work together as a team to get the work done. | 103(90) | 12(10) |
| In my department, people treat each other with respect. | 106(92) | 9(8) |
| When one area in my department gets really busy, others help out. | 100(87) | 15(13) |
| There is good cooperation among hospital departments that need to work together. | 91(79) | 24(21) |
| Hospital departments work well together to provide the best care for patients. | 100(87) | 15(13) |

Table 6: Descriptive statistics on medical error reporting systems (n = 115).

| Statement | Yes (%) | No (%) |
|--|---------|--------|
| We have a system for reporting medical errors in this hospital. (forms or software) | 107(93) | 8 (7) |
| The medical error reporting system; (hard copy forms or software) is readily accessible to nurses in my department to report medical errors. | 97(84) | 18(16) |
| Time taken to report a medical error in the reporting system (form or software) is good enough. | 83(72) | 32(28) |
| The medical error reporting system in my hospital; (hard copy forms or software) is easy to use | 94(82) | 21(18) |
| The medical error reporting system in my hospital; (hard copy forms or software) is very useful in the medical error reporting process. | 98(85) | 17(15) |
| When reporting a medical error, the reporting system ensures that the identity of the person involved in the error is kept anonymous. | 43(38) | 72(63) |
| Medical errors reported in my organization are kept and handled in a confidential manner. | 49(43) | 66(57) |

Results from KIIs showed that the leading barriers to medical errors reporting by nurses are fear of victimization, fear of litigation by the client, fear of the outcome, and failure to adequately empower staff on reporting medical errors. This may be overcome by assuring staff of none punitive measures. “.....there is still fear that it may reflect like their departments are not doing well if they report. Training should be done to let them know that reporting is a positive, rather than negative reflection of their departments..... KI01 (Table 7).

When respondent were asked on what hinders them from reporting medical errors. Out of 115 respondents 70 responded to this question. Out of the 70, 49 (70%) mentioned fear of victimization and job loss as the main barrier to reporting medical errors, 11 (16%) mentioned having a busy work schedule hinders them from reporting and 10 (14%) said the reporting system is not user friendly, they have not been trained on how to use it and it lacks confidentiality (Figure 1).

Bivariate analysis

Data was transformed from likert scale to binary variables. The dependent variable was reporting of medical errors, and therefore Strongly disagree, disagree and neutral were

grouped together because their response to medical error reporting would be similar. The agree and strongly agree were grouped together.

Results show that nurse knowledge on medical errors ($p < 0.039$), management support on reporting ($p < 0.031$), and medical errors reporting systems ($p < 0.002$), all had a p-value less than 0.05 level of significance and therefore there was a significant association of each of these independent variable with reporting medical errors, in the three facilities. The negative relationship between organization safety culture, P Value 0.623, and reporting medical errors may be explained from the view that nurses culture of under or non-reporting is highly seen to result from fear of victimization and fear of the disciplinary action which may result after a nurse has reported (Table 8).

Multivariate analysis

Only one variable, medical error reporting systems was significant (P-value 0.012) when multivariate analysis was done. Where there was medical error reporting system, nurses were 8.574 times more likely to report medical errors than where there was no medical error reporting system (Table 9).

Table 7: Descriptive statistics on reporting of medical errors (n = 115).

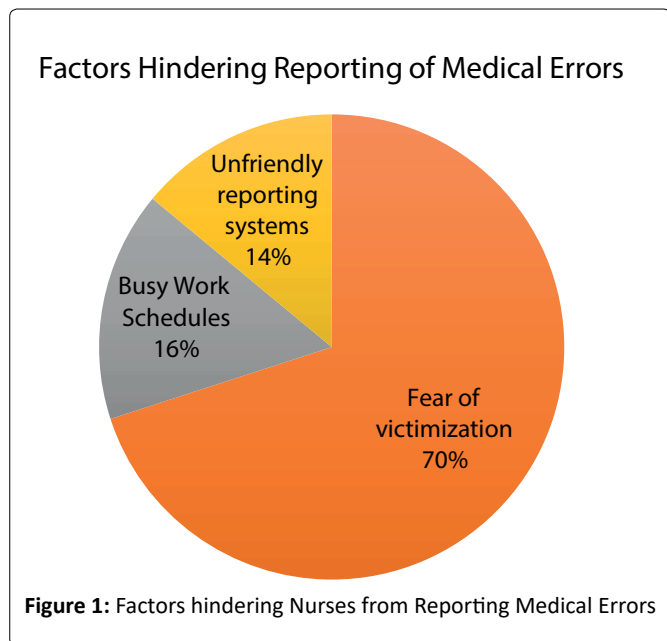
| Statement | Always (%) | Never (%) |
|--|------------|-----------|
| Whenever you commit a medical error in your course of work, how often do you report it? | 74 (64) | 74 (64) |
| When you witness a medical error that has been committed by someone else, how often do you report it? | 62(54) | 62(54) |
| How often would you report a medical error which led to patient death or serious harm including disability? | 71(62) | 71(62) |
| How often would you report a medical error which led to some form of patient harm, though mild to moderate harm? | 69(60) | 69(60) |
| How often would you report a medical error which was corrected before even reaching the patient? | 71(62) | 71(62) |
| How often would you report a medical error which reached the patient but did not cause any harm? | 67(58) | 67(58) |

Table 8: Chi square measure of association.

| Variable | Sample Size (n) | χ^2 | Df | p-value |
|-------------------------------|-----------------|----------|----|---------|
| Nurses Knowledge | 115 | 4.255 | 1 | 0.039 |
| Management Support | 115 | 4.671 | 1 | 0.031 |
| Organizational safety Culture | 115 | 0.242 | 1 | 0.623 |
| Reporting Systems | 115 | 9.769 | 1 | 0.002 |

Table 9: Determinants of medical errors amongst nurses in pediatric wards.

| Variable | B | S.E | Odds Ratio | p-value |
|---|--------|-------|------------|---------|
| Nurse knowledge on Medical errors | | | | |
| Nurses have no knowledge on medical error reporting (ref) | | | 1.000 | |
| Nurses have knowledge on medical error reporting | 0.765 | 0.519 | 2.149 | 0.141 |
| Management support on reporting | | | | |
| Management does not provide support (ref) | | | 1.000 | |
| Management provides support | 0.738 | 0.815 | 2.091 | 0.365 |
| Organizational safety culture | | | | |
| Organization has no safety culture (ref) | | | | |
| Organization has safety culture | -0.465 | 1.335 | 0.628 | 0.728 |
| Medical error reporting systems | | | | |
| No medical error reporting systems (ref) | | | 1.000 | |
| There is medical error reporting systems | 2.149 | 0.860 | 8.574 | 0.012 |



Discussion and Conclusions

Nurses' knowledge on medical errors reporting, influence reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi County. For nurses to report medical errors, it is paramount they understand what medical errors are, what errors are reportable and how to report them.

Management support for medical error reporting, influence reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi County. The management has a key role in ensuring policies exist to guide its staff on medical errors reporting. Organizational leadership and support is critical in improving error reporting. Availability of clear medical error reporting standards and policies is believed to influence medical error reporting. Flexible policies are crucial in creating a safe environment where staff can freely report errors once they occur.

Medical error reporting systems influence reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi County. Any reporting system used should be perceived as useful and easy to use by the users. It should also not be time consuming to report a medical error. Availability of a clear and easy to use system, either be in form of a softcopy or hard copy format determines how well healthcare workers will report medical errors. Availability of clear and easy to use error reporting tool is believed to influence medical error reporting. Lack of an effective medical error reporting system is likely to lead to underreporting of medical errors.

Organizational safety culture was found not to influence reporting of medical errors amongst nurses in pediatric wards in the three teaching and referral hospitals in Nairobi County. A culture of nurses' fearing what may happen after reporting a medical error may inhibit reporting. Nurses mentioned that disciplinary actions such as dismissals, warning letters, statement writing, being sued, victimization and show cause letters instilled fear and made them not to report. A culture

which fosters blame and punishment whenever a medical error occurs discourages reporting of medical errors and is a big threat to patient safety.

Based on the study's findings, the study recommends the following; 1). That nurses' knowledge and understanding of medical errors and medical error reporting be promoted from training done from college/university level and later during orientation and in-service training. 2). Management to disseminate policies and procedures to staff in their health facilities and ensure the same is well understood and implemented correctly. In addition, feedback about changes put into place based on those errors need to be communicated to staff on timely basis. 3). A just culture need to be embraced and cultivated to ensure objective approach to medical errors. This will help address the fear of victimization and hold organizations accountable for system failures. 4). Medical error reporting systems to be simplified and made readily accessible to enable ease of use and timely reporting. Also, anonymity and confidentiality to be incorporated in the reporting process.

This study recommends a further research on the medical error reporting system, to determine why it is the only factor that influenced reporting of medical errors in a combined relationship. This is likely to enhance how the reporting system is designed and improve on its implementation. This is likely to promote patient safety in health facilities.

Acknowledgements

We acknowledge the management and nursing staff of Gertrude's Children's Hospital, Aga Khan University Hospital Nairobi and Kenyatta National Hospital for their support throughout the study period. We also acknowledge the faculty, Department of Health Systems Management, Kenya Methodist University. Thank you.

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DOI: 10.36959/545/411