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Original Research Article

Monitoring strategies on patient safety practices among healthcare providers at Nakuru county referral hospital, Kenya

Fancy J. Kipkech[1]*, Stanley M. Makindi[2], Joseph Juma[1]

[1]Mount Kenya University, School of Public Health, Thika, Kenya
[2]Machakos University, Department of Environmental Sciences, Machakos, Kenya

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***Correspondence:**
Ms. Fancy J. Kipkech,
E-mail: fancykipkech@gmail.com

ABSTRACT

Background: Quality care is achieved through combined efforts which include integration of all the components within the healthcare delivery system. Patient safety is one of the dimensions of enhancing quality healthcare. It involves increasing the awareness about the errors made due to human factors in the process of delivering healthcare services that may lead to harm and other adverse effects.
Methods: This study was on assessment of monitoring strategies on patient safety practices among healthcare providers at Nakuru County Referral Hospital, Kenya. The study was anchored on Donabedian model for assessment of quality of care. The study design was a descriptive cross-sectional study. The sampling technique was purposive, stratified random sampling and proportionate with a sample size of 310 healthcare providers drawn from various departments. Data collection tools were questionnaire, interview schedule and observational checklist. Quantitative data was analysed using descriptive statistics (mean, mode and standard deviation).
Results: The results of the study indicated and concluded that there is adherence to standardized clinical care protocols and guidelines as well as continuous and constant surveillance with clear assessments and evaluation of patient safety practices, accurate collection, storage, analysis and sharing of information on patient safety issues.
Conclusions: The paper recommends the need for policy reviews on healthcare so as to ensure that patient safety issues are reviewed so as to mitigate risks in handling patients. There is need to establish clear guidelines on monitoring and evaluation standards of patient safety practices.

Keywords: Monitoring strategies, Patient safety, Healthcare, Mitigation, Risks

INTRODUCTION

Patient safety is considered to be one of the leading concerns in health service delivery in various levels of public and private hospitals. Globally, the cost of adverse events and other medical errors still remains high, posing a burden in healthcare system. According to Parachute report on the cost of injury in Canada, it was found that most injuries were due to falls, which further resulted to permanent disabilities and patients suffering injuries which were debilitating, with increasing costs on managing such injuries.[1] Patient safety concept has emerged from increased awareness about the errors made due to human factors in the process of delivering healthcare services that has led to harm and other extreme occurrences and strategies to enhance patient care quality.[2]

A standardized clinical care protocol and guidelines to support adherence to quality standardized care through adaptation of healthcare providers and managers to the knowhow and quick access to safety protocols.[3]

A recent study by the World Health Organization (WHO) on patient safety illustrated that, every year millions of patients worldwide suffer from disabilities or death due to receiving unsafe medical care, with developing countries reporting highest incidences.[4] The study further estimates that medical errors alone account for 4% to 16% of the cases and half of these cases are in surgery. Healthcare associated infections in developing countries were rated as, Mali (18.9%), Tanzania (14.8%) and Algeria (9.8%).[5] Another study reported that cases on neonatal care are 3-20 times higher, with 23% from general surgery in Tanzania and 19% at maternity in Kenya.[6]

Continuous and constant surveillance with clear assessments and evaluation of patient safety practices is important for healthcare sustainability. Outcome measures and indicators in a systems approach manner with integration of patient safety, accelerates change of unsafe cultures and adapting to continuous improvement strategies in various clinical settings. It is realized that through accurate collection, storage, analysis and sharing of information on areas of excellence, including paying attention on the experiences learned on safety issues improve patients' outcome. This is significant in our current health system where with new technology, traditional methods of communication and tracking of trends should be enhanced electronically.[7]

Sharing information among various teams enables reflection on individual behaviour, clinical processes and interpersonal relations with different stakeholders with creation of opportunities for mentorship for staff and monitoring patient safety practices.[8] With availability of relevant matrices, means of improvement processes and monitoring of quality of care is achieved. Use of relevant data enables early detection of weaknesses in the systems and cultures that lead to latent conditions that compromise activities related to patient safety.[9]

In organizations with powerful system of monitoring and evaluating of quality and safety of care there is achievement of higher performance and improved quality.[9] Studies have shown that use of various sources of data to detect errors and weak patient safety cultures and systems that may lead to failure in care process promotes coordinated actions to avoid safety risks. Standardized event classification of likely events with proper incident reporting systems encourages voluntary reporting, comparable data within the organization and provides a basis for early intervention, this sheds light in what is in practice that documentation is not up to date. With the available data not utilized to bring the desired changes in quality of care.[10]

Achievements of international quality standards still remains a problem with lack of training and resource constraints in most healthcare institutions and other regulatory bodies. Lack of evidence-based enforcement strategies with inadequate resource allocations to promote, strengthen and support adherence to the standards have been reported.[11] An open and safe reporting culture enhances a focus on identifying what works and how it works to improve areas where safety fails.[12] Patients subjectively experience safe care during hospitalization.

A conducive and comfortable environment depicts a sense of safety and security from harm with collaboration between healthcare providers, patients and visitors.[13] The Donabedian model was designed to be elastic so as to enable and accommodate a wide range of settings of healthcare service delivery.[14] For this study, the model focused on assessment of quality care of which monitoring of patient safety activities is a key component in healthcare service provision.

In Kenya the Ministry of Health strives to achieve the linkage between patient safety to universal health coverage (UHC) and sustainable development goals (SDGs). The Kenya patient safety survey emphasizes on multi-tiered regulatory structures and centers to promote and maintain high standards of quality care, professional development, patient safety standards and norms on infrastructure with leadership and governance in health.[15] It is clear that harm on the patient while receiving care is considered to be on the rise and postulates to be one of the leading causes of global burden as a result of its related complications.[16]

Reports from Kenya showed that 16% of healthcare facilities are at high risk of harming patients during care out of which 56% of the risk posed is imminently high.[17] There is general low attention to risk identification, reduction and management.[18] This paper reports on a research on monitoring strategies on patient safety practices among healthcare providers at Nakuru County Referral Hospital, Kenya.

The study aimed at improving the service provision to the patients attending Nakuru County Referral Hospital and similar health facilities by providing appropriate measures for safe and proper healthcare services provision, this consequently shortens hospital stay and improved healthcare appropriate to the needs of the population.

METHODS

This study was approved by the Mount Kenya University ethics review committee under certificate number (Ref; MHSM/2018/22371) and was undertaken at Nakuru County between January to December of the year 2019. Main activities in the county include farming, business, and production industries. Nakuru County Referral Hospital is a Level 5 Hospital (L5H). It is the largest health facility in the region serving other six neighbouring counties as its referral centre. It has a bed capacity of 600 with additional new maternity unit with a bed capacity of 250. The facility serves a catchment population of 2.3 million and offers both curative

(Medical, Surgical, Peadiatric, Orthopeadics, Mental and Renal units), promotive, preventive and rehabilitative services. It has 18 wards, 4 theatres, mother and baby unit, intensive care unit (ICU), various clinics and comprehensive care centre (CCC). In this study, mixed methods research approach was used to attain triangulation by collecting data from different categories of respondents. The study employed quantitative research approach due to its suitability in testing the relationships between study variables. Qualitative research approach was also used to facilitate an inductive inquiry that enabled the researcher to collect non-statistical data using interviews in an attempt to get in-depth information regarding patient safety practices.

The selection criteria involved those healthcare practitioners who formulate strategies (administrators) as well as those offering preventive, promotive and curative services and nurses involved in general service delivery. The study excluded healthcare providers who are on internships and those referring patients from other health facilities.

Sample size determination

The sample size for the studied population was based on the formula as described expressed in.[19]

n=N/(1+Ne^2)

Under this; n equals to the sample size, while N represents the targeted population, while e denotes the level of precision desired or the confidence level that was taken to be 5%. The calculations for the sample size are displayed as follows;

n=656/(1+656〖(0.05)〗^2)=248.5≈249

As recommended by, it was important to increase the size of the sample to cater for the non-response of the respondents.[20] To ensure that the researcher gathered data from an acceptable number of respondents, it was necessary to increase the sample size from the formula by (20/80)% that is 25%. Thus, the study used a sample size of 310 respondents calculated from a total population of 656 as presented in Table 1.

The Key Informant Interviews yielded qualitative data that was analyzed thematically using content analysis. The response was categorized into 5 Likert scale namely; strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA) against the statements on the objectives of the study.

The response was then summarized using descriptive statistics namely mean (μ) and standard deviation (σ). Quantitative data was analyzed using descriptive statistics that include measures of frequency, percent, mean and standard deviation using Statistical Package for the Social Sciences (SPSS) version 22.

RESULTS

Table 1 presents the distribution of sample size. The researcher sought to establish the extent of effectiveness of monitoring strategies on patient safety practices among healthcare providers at Nakuru County Referral Hospital. The respondents were asked to indicate their level of agreement with the statements on monitoring strategies on patient safety practices. The response was categorized into 5 Likert scale. The response was then summarized using descriptive statistics namely mean (μ) and standard deviation (σ). All the results were as summarized in Table 2. The findings on the adherence to standardized clinical care protocols and guidelines as well as on surveillance and assessment are presented in Figure 1.

The study findings showed that in Nakuru county referral hospital, there was adherence to standardized clinical care protocols and guidelines as opined by majority of the healthcare providers whose response strongly agree to that statement. Through a descriptive statistic, the result yielded a mean of 3.7, with a standard deviation of 0.9. Since the mean exceeded 3, it showed that there was adherence to standardized clinical care protocols and guidelines in Nakuru county referral hospital based on healthcare providers opinions.

Table 1: Distribution of study population and proportion.

Category	Population	Proportion (%) $(N_i/N)*100$	Sample
Administrators	10	1.5	5
Nurses	422	64.3	199
Dentists	15	2.3	7
Medical officers	19	2.9	9
Orthopeadic	7	1.1	3
Nutritionists	11	1.7	5
Health records	15	2.3	7
Occupational therapists	9	1.4	4
Physiotherapy	15	2.3	7
Laboratory	36	5.5	17
Radiographers	12	1.8	6
Clinical officers	77	11.7	36
Pharmacy	8	1.2	4
Total	656	100	310
Proportion by sex	Male	43	177
	Female	57	133
Proportion by age in years	18-27	61	190
	28-32	13.70	43
	33-37	12.30	38
	38-432	10.30	32
	>42	2.17	7

Table 2: Monitoring strategies on patient safety practices.

Statement	Percent (n=259)						
	SD	D	N	A	SA	μ	σ
There is adherence to standardized clinical care protocols and guidelines	3.5	3.5	27.3	49	16.8	3.7	0.9
There is continuous and constant surveillance with clear assessments and evaluation of patient safety practices	6.3	12	18.3	48.6	14.8	3.5	1.1
There is accurate collection, storage, analysis and sharing of information on patient safety issues	3.5	13	24.3	43.1	16	3.5	1.0
There is the use of powerful system of monitoring and evaluating of quality and safety of care	3.6	17	26.6	43.2	9.4	3.4	1.0
There is the use of various sources of data to detect errors and weak patient safety measures	8.3	20	23.6	35.4	12.5	3.2	1.2
There is an open and safe reporting culture which enhances a focus on identifying what works and how it works	3.6	15	27.7	38.7	14.6	3.5	1.0

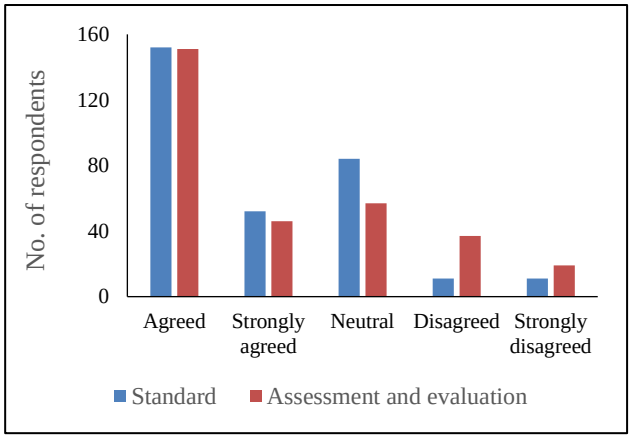

Figure 1: Level of adherence to standardized clinical care protocols and guidelines as well as on surveillance and assessment.

The result on surveillance and assessment showed existing constant surveillance with clear assessments and evaluation of patient safety practices as indicated by majority of the healthcare providers. Through descriptive statistics, there was a mean of 3.5 and a standard deviation of 1.1. showing a stronger agreement with existing constant surveillance with clear assessments and evaluation.

The result on information gathering, storage and sharing as well as on monitoring and evaluation are presented in Figure 2. Study on information gathering, storage and sharing indicated that there was accurate collection, storage, analysis and sharing of information on patient safety issues. The descriptive statistics yielded a mean of 3.5 and a standard deviation of 1.0, indicating existing accurate collection, storage, analysis and sharing of information on patient safety issues in Nakuru county referral hospital. Additionally, result on monitoring and evaluation showed that the Nakuru County Referral Hospital has powerful system of monitoring and evaluating of quality and safety of care. There was a mean of 3.4 and a standard deviation of 1.0, indicating that there was the use of powerful system of monitoring and evaluating of quality and safety of care in Nakuru County referral hospital.

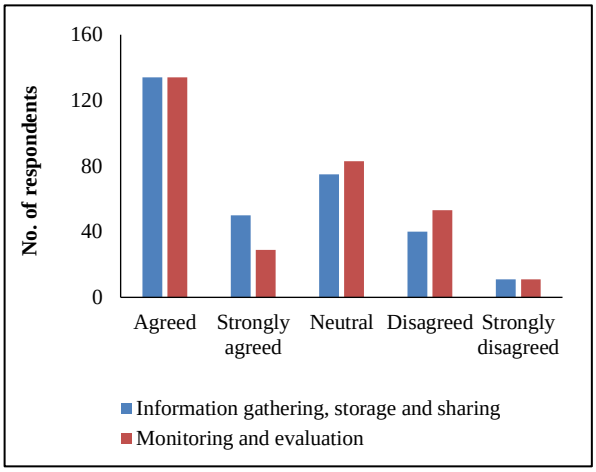

Figure 2: Level of information gathering, storage and sharing as well as on monitoring and evaluation.

The results on the availability of sources of data to detect errors and weak patient safety measures and on open and safe reporting culture are presented in Figure 3. The study showed that there was the use of various sources of data to detect errors and weak patient safety measures. The mean under this was 3.2, with a standard deviation of 1.2, showing the presence of use of various sources of data to detect errors and weak patient safety measures in Nakuru County referral hospital. Through the study, it was further established that there was an open and safe reporting culture which enhances a focus on identifying what works best under health service provision. The descriptive statistics yielded a mean of 3.5 and a standard deviation of 1.0, indicating occurrence of an open and safe reporting culture which enhances a focus on identifying the services that works best and how they work within Nakuru county referral hospital.

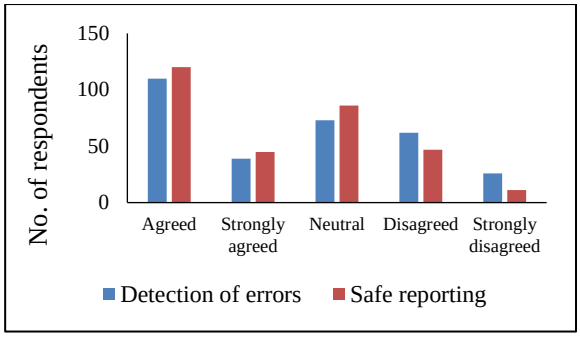

Figure 3: The level of the availability of sources of data to detect errors and weak patient safety measures and on open and safe reporting culture.

DISCUSSION

The study showed an existing continuous and constant surveillance with clear assessments and evaluation of patient safety practices in Nakuru county referral hospital. Such findings are significant in the current global health system where with new technology, traditional methods of communication and tracking of trends should be enhanced electronically.[7] A clean and safe environment enhances and strengthens patient safety that should be ensured by healthcare providers through the administrator's and management support. Indeed, monitoring and evaluating uses a powerful system. This agrees with who points out that continuous and constant surveillance with clear assessments and evaluation of patient safety practices is important for its sustainability.[7] Outcome measures and indicators in a systems approach manner with integration of patient safety, accelerates change of unsafe cultures and adapting to continuous improvement strategies in various clinical settings. Indeed, studies have shown that sharing of information among various teams enables reflection on individual behavior, clinical processes and interpersonal relations with different stakeholders, enabling creation of opportunities for mentorship for health care staff and monitoring patient safety practices.[8] Indeed, organizations with powerful system of monitoring and evaluating of quality and safety of care have been found to achieve higher performance and improved quality.[9] Furthermore, a conducive and comfortable environment depicts a sense of safety and security from harm with collaboration between healthcare providers, patients and visitors in care as vital in supporting the notion of safe and effective teams.[13]

Despite all those other factors discussed above being properly and positively embraced within the Nakuru County Referral Hospital, the study unfolded some laxity points that were detrimental and stood a chance to deter proper health service provision with the facility. Among these, the study also sought to establish how often the patient safety issues are reviewed in Nakuru County Referral Hospital. Through interviews with the administrators, it was shown that reviews were rarely done. It was found that there was a committee overlooking patient safety practices in this facility. However, the committee was not having regular meetings. The study also revealed that there were no guidelines on monitoring and evaluation standards of patient safety practices. This was in contrary to a study by who report that regular technical support meetings and education with peer mentorship offers a learning experience that enhances in improving patient outcomes.[21]

CONCLUSION

Nakuru county referral hospital was found to have good monitoring strategies on patient safety practices among healthcare providers. There was proper adherence to standardized clinical care protocols and guidelines as well as continuous and constant surveillance with clear assessments and evaluation of patient safety practices, accurate collection, storage, analysis and sharing of information on patient safety issues. However, despite all these positive interventions by the facility, there was still need for policy reviews so as to ensure that patient safety issues are reviewed so as to mitigate practices that can endanger the patients. The hospital administration should ensure compliance by making sure that healthcare providers record and report incidents that occur when giving care to patients.

There is need to simplify and standardize procedures so as to guide healthcare providers while discharging their services. This should be integrated with training on patient safety to enhance patient safety culture in the hospital. Furthermore, there is the need to establish clear guidelines on monitoring and evaluation standards on patient safety practices. Patient involvement in safety issues should be encouraged at all levels so as to achieve continuous improvement and consistency in monitoring and evaluation of patient safety.

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