Nurse Managers' Perspectives on Care Quality and Safety in Rural Hospitals in Uganda

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Abstract

Rural hospitals in sub-Saharan African countries play a key role in dealing with a high level of disease burden, but are usually poorly equipped with resources. Ward nurse managers in rural hospitals are in an ideal position to negotiate resources and bridge gaps in quality improvements. The aim of this study was to explore nurse managers' perspectives on quality and safe care in rural hospitals in Uganda. This was a qualitative interpretive study in which 11 ward nurse managers with at least two years' experience in the role were purposively selected to participate in the study. In-depth interviews using a semi-structured interview guide were applied for data collection. Thematic analysis was applied to analyse the data. Four themes were identified from the interviews. These themes explained how nurse managers engaged stakeholders in quality and safe care for patients; supported staff through supervision; improvised practices to cope with resource and equipment constraints; and being constrained by poor working conditions. Nurse managers in rural hospitals in sub-Saharan Africa face unique challenges in ensuring quality and safe care for patients due to a lack of basic human and material resources. The strategies they apply in quality improvements have implications for policy and resource development.

Keywords: nurse managers; rural healthcare facilities; Uganda; quality and safe care; nurse

Introduction

The majority of populations in sub-Saharan Africa live in rural areas (United Nations 2018). Although rural hospitals in this region play a key role in dealing with a high level of disease burden, they are usually poorly equipped with human resources, medication supplies and equipment (World Health Organisation 2015). Disparities in quality and safe care for patients between low-income countries and middle- and high-income

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countries have been identified (Kruk et al. 2018). Ward nurse managers in rural hospitals of resource-poor countries are in an ideal position to negotiate resources and bridge gaps in quality and safety improvements. Studies on their perspectives of facilitators and barriers in quality improvements are much needed to inform policy and resource development for addressing global disparities in quality and safe care for patients. This study addressed a gap in research by exploring approaches utilised to optimise quality and safe care for patients by ward nurse managers, and resource factors affecting their practice in rural hospitals in Uganda.

Uganda is facing a great challenge in developing resources to support quality improvement in rural hospitals (Kakyo and Xiao 2017; Kakyo and Xiao 2019). Rural hospitals are part of the public health system in Uganda and are regulated by quality improvement methods and frameworks (Ministry of Health, 2015; Ministry of Health, 2016). With efforts to improve accessibility to health care in rural areas, the government of Uganda aims to increase the number of rural health facilities. Each rural health facility is designed to serve at least 5 000 people (Ministry of Health 2017). These facilities are the first point of contact for most Ugandans living in rural areas. Given the overwhelming number of patients at these facilities, their focus has been on improving access to services (Ministry of Health 2014). However, in recent years the Ministry of Health has extended its focus to include providing safe and quality services (Ministry of Health 2016). This has increased pressure on the rural health facilities to improve the quality and safety of care, yet there is a lack of actions in policy and resource development to support the movement (Kakyo and Xiao 2017; Kakyo and Xiao 2019).

Systemic factors arising from the health system and health care organisations eventually affect the quality and safety of care delivered by nurses (Carayon et al. 2014). The negative impact of a low nurse-to-patient ratio on patient safety has been well established in high-income countries (Aiken et al. 2014; Ball et al. 2014). The issues of limited resources and the impact thereof are worse in rural healthcare settings, especially in Africa. Adherence to quality improvement endeavours, e.g. evidence-based practices, improves the quality and safety of care for patients significantly when essential supplies are in place (Kumar et al. 2016). However, a lack of resources, e.g. a pulse-oximeter, compromises even basic care in rural hospitals (Rahman et al. 2017). Furthermore, poor patient outcomes, including mortality, have been attributed to the lack of resources (Merali et al. 2014). Evidence shows that increasing hospital supplies improves the quality of care services, while a shortage of resources results in health workers improvising (Burgess 2016; Mutemwa et al. 2017). Improvising can compromise quality by creating variations in care that threaten patient safety (Rieder 2017).

Working conditions can predict the quality and safety of care for patients at any facility (Stimpfel et al. 2019). A study revealed that quality indicators of falls and pressure ulcers decline when working conditions such as shift hours and nursing education are improved (Stalpers et al. 2015). Working conditions also depend on the availability of resources, including equipment and supplies (Stevens et al. 2017). Studies reveal that

nurse managers at ward level have a limited impact on resources and supplies that are essential for quality and safe care for patients (Barrientos-Trigo et al. 2018). Factors affecting their influence on policy and resource development remain largely unknown.

Kruk and colleagues described a "high-quality health system framework" with three interrelated domains: foundations, the processes of care, and quality impacts (Kruk et al. 2018). The domain of "foundations" emphasises the care needs and expectations of the population, governance, platforms to access organised care services—including adequate workforce and material resources (equipment, medicines and data). The domain of "processes of care" focuses on everyday resilience to cope with challenges to ensure quality and safe care as well as positive patient and staff experiences. The domain of "quality impacts" includes better health, economic benefit and confidence in the system. This framework explains a system approach to and the complex nature of quality improvements in a socio-political context. The framework informed the researchers to interpret nurse managers' perceived facilitators and barriers to quality improvements in the Uganda healthcare context.

Methods

Aim

The aim of the study was to explore ward nurse managers' perspectives on quality and safe care for patients in rural hospitals in Uganda. Under this aim, the study objectives were to identify factors that enabled or impeded ward nurse managers' practices in quality improvements.

Design

The study utilised a qualitative study design informed by Gadamer's hermeneutic principles. Gadamer believed that it was impossible for researchers to bracket their preconceived thoughts and ideas when they engaged in interpreting human action (Gadamer 1989). On the contrary, researchers must bring their fore-understanding (so called prejudice) into the "hermeneutic circle," and only in this way could they begin to understand the meaning underlying the human action (Gadamer 1989). These principles enabled the first author, an experienced ward manager from a rural hospital in an African country, to bring personal pre-understandings to the study design, as well as interactive dialogues with ward managers and the interpretation of findings.

Participants

Ward nurse managers working in two rural public hospitals were all invited to participate in the study through the principle nursing officer (PNO) who is the head nurse in each hospital. The PNO, via administrative staff, assisted the researchers to distribute information packs to all 30 ward nurse managers. The ward nurse managers contacted the researcher (TK) directly via email or a pre-paid and pre-addressed letter regarding their interest to participate in the study. The researcher received replies from

19 ward nurse managers willing to participate in the study. Participants with at least two years' experiences in a ward nurse managerial role were purposively sampled. This led to a total of 11 participants in the study.

Data Collection

Data were collected with the use of a semi-structured question guide (see Table 1) whose design was based on a thorough review of the literature. Interviews were conducted from meeting rooms located within the hospital premises. This venue was chosen by the participants on the basis of privacy and minimising interruptions. The face-to-face interviews, which lasted between 45 to 90 minutes, were recorded and later the researcher transcribed them. In addition, the researcher took field notes to record the non-verbal aspects of the interviews.

Table 1: A guide for semi-structured interviews

Questions
1. Can you please tell me about your experience as a nurse?
2. Can you please tell me about your experience as a nurse manager?
3. Why were you selected for this role?
4. What hospital/management standards or guidelines have been put in place to ensure the safety of patients and quality of care given to patients?
5. What sorts of activities/programmes in your daily practice are you involved in that are aimed at improving patient safety and quality of patient care?
6. What barriers/difficulties have you encountered while implementing the above programmes?
7. What strategies have you devised to overcome these barriers?
8. What factors enable you to implement continuous quality improvement at your work place?
9. What knowledge and skills are required to carry out continuous quality improvement?

Source: Kakyo et al. 2017, 245

Ethical Considerations

The study obtained ethical approval from the social and behavioural research ethics committee at Flinders University (ethical clearance number: 6671) located in Australia. Local approval was also obtained from an institutional review board at Makerere University (ethical clearance number 2015-013) located in Uganda. Permission from hospital administrators to access participants was also obtained. Informed consent was also gained from the participants after issuing them with participant information packs. Pseudo-names have been used in reporting results in order to protect the identity of participants.

Data Analysis

This study used the hermeneutic circle, as developed by Gadamer (1989), which states that to reach understanding the researcher must continually move between the parts and whole of the text. Diekelman, a nursing researcher, recommends a seven-step procedure for data analysis using hermeneutics (Holloway and Wheeler 2010; Polit and Beck 2017) which was followed to analyse the data. The first author listened to the interviews to comprehend the experiences of the participants and to summarise the content based on the aim and objective of the study. Data were transcribed verbatim for coding. Similar codes across individual interviews were summarised as group codes. Both researchers read the transcripts and undertook codes separately and gained consensus on findings through discussions in regular meetings. The researchers then searched for potential themes by relating common meanings identified in the data to the three domains described in the high-quality health system framework when appropriate. The final themes represent the fusion of nurse managers' perspectives about approaches to optimising care quality and safety and the researchers' beliefs in this area.

Trustworthiness

In order to achieve dependability, consistency must be evident in the write up (Polit and Beck 2017). This was achieved by the researchers' active involvement in the process of analysing data and developing themes to present the findings. Credibility was achieved by clarifying meanings with the participants during the process of data collection. Transferability for this study has been achieved by describing the characteristics of the participants and their social context in the results section. Confirmability was demonstrated through a decision trail by relating the findings to the "high-quality health system framework" (Kruk et al. 2018) and relevant studies in the field.

Results

Participants had a mean work experience of 15 years and a mean experience of 8 years as a ward manager. Ten of them had a diploma in nursing and only one had obtained a Bachelor of Nursing degree. None of them had done postgraduate studies on nursing management. Participants' demographic information is presented in Table 2. Four themes were identified from the data analysis: engaging stakeholders; supporting staff through supervision; improvising practices to cope with resource and equipment constraints; and being constrained by poor working conditions. These themes are further explained below with quotations from the raw data. More examples from interviews are presented in Table 3.

Table 2: Information about department specifics and characteristics of the participants

Participant	Gender	Qualification	Years in nursing	Years as a manager	Training in management	Departments	Nurse/bed ratio	Admissions	Discharges
Tobia	F	Diploma	17	14	No	Medical	1:7	143	130
Tevy	F	Diploma	12	10	No	Surgical	1:5	50	35
Tasha	F	Diploma	26	15	No	MandCH	1:1	90	-
Takina	F	Diploma	5	2	No	Surgical	1:4	20	15
Tyra	F	Diploma	9	3	No	Paediatric	1:4	500	300
Tiwa	F	Diploma	30	18	No	Medical	1:3	42	42
Tula	F	Diploma	21	11	No	Medical	1:6	500	280
Tadd	M	Diploma	10	5	No	Medical	1:4	750	660
Trina	F	Diploma	22	8	No	Maternity	1:4	604	504
Tori	F	Diploma	15	6	Yes	PandG	1:5	208	180
Tai	M	BD	4	3	Yes	Paediatric	1:11	400	350

Source: Kakyo and Xiao 2017, 246; (1) Participants' names are pseudonyms; (2) F=female; (3) M=male; (4) BD= Bachelor's degree; (5) The number of admissions, discharges are calculated per month. (6) MandCH=Maternal and child health; (7) PandG= Postnatal and gynecology

Table 3: More examples from interviews

Themes	**Researchers' interpretation**	**Excerpts**
Engaging stakeholders	Nurse managers remained accountable to management through writing reports to keep the executive management informed of quality and safe care projects that were being implemented at the different wards.	And the reports help the administration because nurses work with the doctors, and they are under hospital administration. So, the reports we give these administrators can help by affecting how the government responds to some of the needs, like say we need more medical workers. (Tai)
Supporting staff through supervision	They demonstrated leading by example when supervising staff in quality improvement activities.	If staff come and find me doing something [related to quality improvements], automatically they will also join in. You also have to associate with your junior staff. You should not leave them alone when they are working because if you just sit in the office and you don't supervise them, they also get demoralised. (Tori)
Improvising practices to cope with resource and equipment constraints	Nurse managers were aware that resources, ranging from stationery to sundries, impacted directly on safety of care. The rural hospitals were still using non-digital forms of documentation to keep records. However, lacking appropriate forms to record data was a barrier.	Now we are talking about records, if you don't have the forms. Actually, we don't have. So, the in-charge has to make sure there are other things to use [in place of the standardised forms]. (Tiwa)
Being constrained by poor working conditions	One of the challenges identified while ensuring quality and safe care was the impact of working conditions. Nurse managers acknowledged workload and poor remuneration that made working conditions tough.	… work load, when you have planned for the staff on the unit [ward], then something disrupts you for example, a seminar or workshop. So, all of a sudden you find you are alone on duty. Poor remuneration-salary is also another problem. (Tiwa)

Engaging Stakeholders

Engaging stakeholders through communications was one of the vital tools used to build everyday resilience to enable quality and safe care for patients. Ward nurse managers had to continuously engage nursing staff and patients to optimise quality and safe care. Nurse managers further acknowledged that maintaining the culture of quality meant additional responsibilities and required roles to be clearly stipulated. If any quality improvement project was to be initiated on the wards, the nurse managers were expected to communicate the importance of the project and how it fed into quality and safe care.

> If something has been neglected and now you want to bring it back [in quality improvements], you call for meetings. You tell them [nurses] why you have called them, the importance of carrying out that activity, then you ask how they are going to do it? Because it may be an additional responsibility for them. You have to discuss with them to move [an] extra mile and make sure they do that activity. (Tula)

In this situation, communication with frontline nurses was a strategy to build everyday resilience in quality improvement. With limited human resources in rural hospitals to respond to emergency situations, ward nurse managers had to seek help from other departments. This strategy boosted labour to deliver safe and quality care, as Tiwa stated:

> Communication is a vital thing. So, when you see you are stuck, you can't hesitate to call someone from another unit. Like for us we got five patients, all were involved in a motor vehicle accident; we had to call the PNO [head of nursing]. (Tiwa)

This situation revealed that engaging other departments was a strategy to cope with emergency situations in the processes of care delivery. Ward nurse managers also used their interaction with fellow nurse managers in regular meetings as a learning opportunity. In those meetings, they shared different tactics to solve challenges or problems in quality:

> If you are managing one unit, such as paediatrics, you will meet up with the manager from the surgical unit, from medicine or another ward, and you are going to know from them if they have a problem and how they have solved it and then, you know, maybe I could copy that for my ward. (Tai)

In this situation, peer support and learning from each other enabled nurse managers to cope with challenges in quality improvements they encountered. These strategies helped them to build everyday resilience in management.

Nursing staff numbers were few per shift in comparison to patient numbers. The ward nurse managers had to employ strategies of engaging patients or their attendants to maintain good communication with the nursing staff on duty. If, for example, a patient had not been seen by a doctor during the routine ward rounds, the patient or attendant would inform the nurse on duty directly, as Tyra said:

> We encourage attendants of the patients to be active while on the ward since we have too many patients. So, the patients and attendants report to us, the nurses, in case they missed getting their treatment or if they were not seen by the doctor. (Tyra)

In this situation, engaging patients or their attendants in reporting everyday care was a strategy to ensure that their needs were met in the processes of care delivery.

Supporting Staff through Supervision

Supervision of staff was another strategy used by nurse managers to build everyday resilience in the processes of care to enable the quality of care. Nurse managers supervised their staff to ensure that they would adhere to set standards aimed at quality care, as elaborated by Tiwa:

> We have an impromptu monitoring [in quality improvements]. We visit different units as a hospital quality improvement team. We have a form we use to score them [regarding their performance]. This is part of our role to monitor the quality in these units. We have a good opportunity to observe and question them [in-charge nurses] about problems and provide them with feedback. (Tiwa)

This team approach to monitoring, supervising and giving feedback to nurses regarding quality improvement enabled the hospitals to build resilience in dealing with the challenges nurses encountered in the processes of care across the practice.

Other strategies used by nurse managers to supervise their staff were to show their passion for quality improvements and demonstrate this to staff through exemplary leadership. As Tevy notes, leading by example enabled the manager to change the attitudes of staff towards activities aimed at improving the quality of care:

> Yeah you say [to nurses], let's do it together. As you do it with them, they tend to get to know what should be done and they also see that it is important when it is done. (Tevy)

Supervision, whether impromptu or continuous, was a useful strategy to sustain the enthusiasm toward improved quality and safety of care.

Improvising Practices to Cope with Resource and Equipment Constraints

Improvising practices were commonly utilised by nurse managers to cope with low staffing levels and the lack of basic supplies for the required materials, e.g. equipment and medications. This approach to managing everyday care activities has the possibility of building resilience during the processes of care. Ward nurse managers described insufficient staffing to support care service delivery and they had to carefully roster staff for each shift, based on the qualifications and skills possessed by the nurses, as Tadd said:

> You look at your staff and see who can manage this and so you give them those responsibilities depending on how you know them. (Tadd)

In this situation, nurse managers had to deal with the consequences of an inadequate workforce in the system, a vital element in the domain of "foundations" described in the "high-quality health system framework." When dealing with a shortage of equipment and supplies, Tavy, a ward nurse manager, explained that the first step—before improvising—was requisitioning for the items from the facility storage warehouse:

> First of all, I should make sure all the gadgets which are to be used are in place. I order from the store, including the bins and bin-liners, the gloves. I make sure everything is brought into the unit. (Tevy)

In the event that the facility storage was out of supplies, the nurse managers had to find a solution to overcome the deficit. An example of this was described as what happened during a continuous quality improvement project aimed to improve safety by segregating waste into different bins. Unfortunately, bins were not available, so the nurses had to improvise with boxes, which were either labelled or coded with different colours, to ease the process of segregating the waste, as Tyra stated:

> We make use of what is available. We improvise using boxes, buckets, different buckets with [different] colours, but they are not lined with bin-liners. (Tyra)

In other cases, where equipment and medicines were of poor quality, patients were asked if they could afford the drugs. If so, they were asked to buy better-quality drugs and equipment. As Tai elaborated:

> If the patients can afford [it], they can buy good quality drugs. This is quality for some, but not for all. (Tai)

Ward nurse managers had to improvise with the fewest resources and ask patients to actively take part in their care, even if it came at the patients' costs.

Being Constrained by Poor Working Conditions

Nurse managers described poor working conditions as important systemic factors in constraining their capabilities to manage quality improvements. They reported that they simply tolerated their poor work conditions, particularly relating to their low wages:

> But actually, it is sacrificing. It is a vocation you can call it. To say that you are satisfied with payments … [sighs]. First there is overworking, secondly there is little pay, third no accommodation. But still we are persisting … What can we do? (Tula)

In addition, the limited number of nurses available per shift meant an overwhelming workload, as pointed out by Trina:

> It's the workload; you sometimes pack your lunch and end up not eating it. (Trina)

The heavy workload, coupled with low wages, were some of the challenges faced by the nurse managers.

> The payment is low and the workload is so big. Actually, it is unbearable. (Tadd)

These conditions compelled the nurse managers to work within the confines of their limits to get the work done. In these cases, the poor working conditions were unlikely to support the workforce to build everyday resilience to achieve quality and safe care for patients.

Discussion

This study illustrated nurse managers' perspectives of approaches used to ensure quality and safe care, despite the constraints of limited resources. Engaging stakeholders in quality improvements enabled nurse managers to effectively make use of available resources with little additional cost. This strategy, combined with supervision, ensured everyday resilience to support quality involvements. Nurse managers also improvised practices to cope with resource constraints, although the value of improvising in everyday resilience to support quality improvement is questionable. In addition, they faced poor working conditions that limited their capability to build everyday adaptability to facilitate quality and safe care for patients.

The finding of our study, namely to engage nursing staff, fellow nurse managers and executive management in efforts to improve and sustain quality and safe care, supports the findings of previous studies that report stakeholder engagement in the entire process of quality improvement as a condition to ensure that the agreed goals are achieved in a collaborative way (Grol et al. 2013; Wiig et al. 2014). An effective communication structure between staff creates an enabling environment for safe care; it fosters teamwork and promotes efficiency in the workplace (Gausvik et al. 2015). Effective communication with patients and their caregivers at a health facility will also contribute to patient-centred care services (Kruk et al. 2014). These findings demonstrate that nurse managers in rural hospitals in Uganda are no different in adopting such mechanisms to offset the challenges faced.

Patient involvement in quality and safe care has been shown to have better patient outcomes (Baker et al. 2016). In our study, nurse managers used casual conversations with patients and their caregivers regarding the type of care being received at the hospitals. In this way, they would determine the extent to which their patients' care needs were being met. This strategy worked well for the rural healthcare settings which are characterised by low levels of literacy. In the developed world, researchers use formal methods (incident reports) and patient satisfaction surveys to trigger investigation and resolution regarding quality and safe care (O'Hara et al. 2018). However, these methods have not been adopted in the rural Ugandan healthcare system, as they would use more resources and put further tension on an already resource-strained facility. In rural hospitals, such as those in this study, patient views can qualitatively be

gained through individual interviews and the use of focus groups to optimise their views on the quality and safety of care (Al-Abri and Al-Balushi 2014; Renedo et al. 2015).

Although the lack of necessary resources in rural healthcare settings are reported both in the developed and developing world, our study revealed the lack of basic supplies such as medicines and infection control waste bins. These were the main obstacles to achieving quality and safe care for patients. Our study supports previous studies that nurse managers have little control over the adequate supply of resources in rural healthcare settings (Barrientos-Trigo et al. 2018). Instead, they modified their management approaches to suit the practice context. Their actions on improvising to cope with resource and equipment restraints could impact the quality of care.

It is widely recommended that the effective approach to improving the workforce quality and quantity, would be to enhance working conditions to support the workforce and materials (equipment, medications and data) in quality improvements. It is also necessary to engage managers at hospital level as well as policy-makers in the healthcare system (Kruk et al. 2018; Barrientos-Trigo et al. 2018). This kind of engagement was not fully utilised by nurse managers in our study. The management competencies enabling ward nurse managers to explore alternative solutions to everyday problems can be developed through education preparation for this group of nurses. An efficient communication channel in the healthcare system for constructive dialogues between ward nurse managers and policy makers would also go a long away in addressing gaps in quality of care.

Limitations

This study has limitations. First, as a contextual-based study using a qualitative approach, findings may not be generalised, but can be transferred to similar socio-healthcare context. Second, the number of rural hospitals and participants in the study is small. There might be other perspectives on optimising care quality and safe care for patients in rural care settings that have not been captured in this study. More studies with this crucial group of nurses are much needed in the future to inform interventions on preparing nurse managers with the capability to lead quality improvement in rural hospitals in resource-poor care settings.

Conclusion

Our study identifies that nurse managers use multiple strategies to ensure quality and safe care in coping with resource constraints in their practice context. Nurse managers' perspectives are described in four themes. Engaging stakeholders in quality improvements via effective communication enabled them to optimise the quality and safety of care for patients. Supervising staff was the other approach to achieving quality of care. Both approaches support the building of resilience as described in the domain "processes of care" in the "high-quality health system framework." However, some of the strategies that nurse managers used, for example improvising practices, might

compromise the quality and safe care for patients. The poor working conditions need urgent attention from policy makers if quality and safe care is the focus of patient-centred care in the healthcare system.

Nurse managers are the cornerstone to bridging gaps in the quality and safety of care for patients in resource-poor settings. However, they usually receive limited education and on-the-job-training to prepare them to deal with these challenges effectively and creatively. Education programmes targeting this group of nurses—through international collaboration and using massive open online courses—are suggested as one way to address the current situation. Online peer support and mentorship through international collaboration are also imperative to share and mobilise knowledge and skills in dealing with challenging situations and identifying practical solutions. In addition, executive managers with portfolios in workforce development, safety and quality are in an ideal position to support nurse managers to influence policy and resource development.

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