

Barriers in Implementing the Accreditation Standards for a Safe Environment in Public Hospitals of Rwanda: A Qualitative Study

Jean Pierre Bideri^{1*}, Jean de Dieu Habimana², Erigene Rutayisire¹, Theoneste Ntakirutimana³, Cyprien Munyanshongore¹

¹Community Health, School of Public Health, College of Medicine and Health Sciences, University of Rwanda, Kigali, Rwanda

²Human Nutrition and Dietetics, School of Health Sciences, College of Medicine and Health Sciences, University of Rwanda, Kigali, Rwanda

³Environmental Health Sciences, School of Public Health, College of Medicine and Health Sciences, University of Rwanda, Kigali, Rwanda

***Corresponding author:** Bideri Jean Pierre. Community Health, School of Public Health, College of Medicine and Health Sciences, University of Rwanda, Kigali, Rwanda. Email: peterbideri@gmail.com. ORCID: <https://orcid.org/0009-0009-2792-5226>

Cite as: Bideri JP, Habimana JD, Rutayisire E, Ntakirutimana T, Munyanshongore C. Barriers in Implementing the Accreditation Standards for a Safe Environment in Public Hospitals of Rwanda: A Qualitative Study. *Rwanda J Med Health Sci.* 2025;8(3): 617-630. <https://dx.doi.org/10.4314/rjmhs.v8i3.14>.

Abstract

Background

The adherence to hospital accreditation standards in health facilities, which are designed to ensure the delivery of safe and high-quality healthcare services, remains a challenge. Therefore, this study sought to examine the key barriers affecting the implementation of hospital accreditation standards among health professionals in Rwanda.

Methods

This was a cross-sectional study in which 40 semi-structured key informant interviews were conducted from January to March 2024, in selected public hospitals. Participants aged 27–48 years were purposively recruited based on their roles and experience in hospital operations. The interviews explored the barriers affecting the effective implementation of Risk Area 3, which addresses ensuring a safe environment for staff and patients. A qualitative phenomenological approach was used to capture participants lived experiences and perceptions of the implementation process.

Results

The present study identified the barriers that deterred the implementation of IPC measures such as overwhelming workload, financial constraint, absence of training, turnover of staff, paucity of appropriate infrastructure, lack of enough coordination of IPC measure, lack of enough supervision by EHO, insufficient space for hazardous materials and other related materials.

Conclusion

Limited resources are the key contributor to non-compliance with IPC measures. Greater investment in both physical and human resources, along with continuous professional training, is essential to enhance the implementation and compliance with hospital accreditation standards. Policymakers should actively engage multinational organisations and international development partners to provide technical assistance and support capacity-building initiatives that strengthen local efforts toward effective and sustainable accreditation implementation.

Rwanda J Med Health Sci 2025;8(3): 617-630

Keywords: Accreditation Standards, Barriers, Implementation, Public Hospitals, Rwanda

Introduction

Accreditation of health-care organisations is an established external evaluation mechanism designed to promote minimum safety and quality standards and to stimulate continuous improvement in health systems. International bodies and frameworks, notably the International Society for Quality in Health Care (ISQua) and guidance developed with the World Health Organization have shaped modern accreditation practices by defining standards, assessor training, and methods for external evaluation. These global efforts treat accreditation as a policy tool to strengthen patient safety, governance and accountability across diverse health systems.[1]

Within the African region, WHO/AFRO and regional accreditation partners have adapted global models to local contexts, offering stepwise or phased accreditation pathways (including interim laboratory accreditation routes) and supporting national capacity building where independent national accreditors are not yet fully established. Regional organisations and networks for example the Council for Health Service Accreditation of Southern Africa (COHSASA) also provides Africa-focused accreditation services and technical assistance, recognizing the need to balance international benchmarks with resource-sensitive implementation approaches.[2]

The Rwandan experience illustrates how a low-income country can operationalize accreditation as part of a broader quality-improvement agenda. Beginning with engagements with COHSASA and building performance-based financing assessments, the Ministry of Health developed national hospital accreditation standards and a performance assessment toolkit. This programme has been rolled out since the early 2010s and updated in successive standard editions including the most recent 3rd edition toolkit and national surveys published by the MOH. Accreditation results are publicly reported, used to incentivize

improvements, and have shown progressive uptake across district and referral hospitals. Rwanda's pathway highlights the importance of local adaptation, phased implementation, and alignment with national quality and financing mechanisms.[3] According to the World Health Organization (WHO), patient safety is the "absence of preventable harm to a patient during the process of healthcare and reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum".[4] Quality of care is one of the main dimensions through which healthcare services are delivered, and patient safety is major component of UHC.[5] It has been agreed that quality healthcare around the globe should be safe, effective, and people centered.[5] To actually benefit from good healthcare, health services should also be equitable, integrated, timely, and efficient. [5] Key to being able to implement these patient safety strategies are clear policies, skilled healthcare workers, the use of data to improve safety and leadership capabilities. [3] and involving the patient efficiently in their own care.[4]

Global health systems have embraced accreditation of health facilities as a means of improving quality and patient safety. While interest in health facilities accreditation is on the increase in low and middle-income countries (LMICs) after decades of focusing on high-income nations, the uptake and success of accreditation initiatives in LMICs have been inconsistent.[3] Nevertheless, over the last three decades, developed countries have promoted the concept of accreditation among their developing counterparts, resulting in an increase in the number of accrediting programs worldwide.[6]

Despite the substantial worldwide financial investments in accreditation, the evidence base supporting its effectiveness is weak and contradictory.[7] These programs seek to standardise care, improve clinical results, and promote a culture of continuous quality improvement.[8] However, implementation and longevity of certification initiatives in low- and middle-income countries have been patchy.[9]

Limited financial resources, inadequate infrastructure, and different levels of official support all contribute to the ineffectiveness of these programs.[10] Furthermore, adapting international certification standards to local situations remains a hard task.[9] Despite these challenges, there are successful examples of specialised certification models that have resulted in significant improvements in healthcare service.[11] Continuous research and policy initiatives are required to address these obstacles and establish context-specific measures that assure the long-term success of hospital accreditation in LMICs.[9]

Healthcare systems around the world are heavily burdened by healthcare-associated infections (HAIs), which compromise patient safety and service delivery.[12] These infections contribute to avoidable morbidity and mortality in addition to lengthening hospital stays and raising medical expenses.[13] Nonetheless, there is strong evidence that the incidence of HAIs can be significantly decreased by using evidence-based infection prevention and control (IPC) techniques.[14] It has been demonstrated that these steps, when taken consistently, improve clinical results and raise the standard of treatment in both high- and low-resource environments.[15,16]

According to a global report on infection prevention and control methods, at least one HAI is acquired during a hospital stay for every 100 patients in acute-care hospitals, and seven patients in high-income countries (HICs) and fifteen patients in LMICs are claimed by HAIs.[17] Although the principle of “do no harm” remains central to healthcare, instances of unsafe medical care persist and are associated with considerable global morbidity and mortality. [18]

In Rwanda, the government is responsible for providing healthcare services to the public through the Ministry of Health (MOH). As the custodian of public health, the MOH consistently strives to implement effective strategies to achieve

national health objectives. This involves identifying the health needs and risk factors affecting individuals and communities, while integrating evidence-based and scientific approaches into policy planning and decision-making.

In health certification, a standard is defined as "a desired and achievable level of performance against which actual performance is measured". Regulations enable "health service organisations, large and small, to embed practical and effective quality improvement and patient safety initiatives into their daily operations". [19] Accreditation and continuous quality improvement are an inseparable part of health service activities. Many countries have implemented healthcare accreditation and have achieved different results, and many others have implemented accreditation without strong evidence to prove that accreditation is the most appropriate source for improving the quality of health services. [20] The present study therefore, assessed the barriers hindering healthcare providers from complying with the Risk Area number 3 regarding the Safe Environment for Staff, Patients and Visitors.

Methods and Materials

Study setting

The study was conducted in public hospitals of Rwanda, including referral, provincial and district hospitals. All four provinces and Kigali city were included. According to the Health Sector Annual performance report 2020–2021, Rwanda there are eight referral, four provincial and 36 district hospitals together making 48 public hospitals.[21]

Study design

This study used a cross-sectional phenomenological qualitative study design. We used Husserl's descriptive phenomenological approach, which calls for the use of individual voices to describe a phenomenon.[22] Husserl's philosophy suggests that to prevent misinterpreting the results, researchers should disregard prior information,

preconceived notions, and judgments about the topic being studied before data collection.[23] When collecting and analysing qualitative data, phenomenological researchers should ask targeted questions to engage in phenomenological reduction.[24]

Study participants, sample size and sampling procedure

This study targeted healthcare professionals acting as focal persons for Quality Improvement (QI) and Infection Prevention and Control (IPC) within selected hospitals across Rwanda. In every hospital nationally, one IPC focal person and one QI focal person are officially assigned, usually from Environmental Health Officer (EHO) or Nursing cadres. These individuals were selected because they play a central role in implementing and monitoring IPC and QI standards, making them the most relevant respondents for the study. In total, 40 focal persons participated, one IPC focal person and one QI focal person from each of the 20 sampled hospitals. Only eligible focal people who provided informed consent were included.

Although a 10% sample of national hospitals would have been sufficient in principle,[25] a larger proportion was selected to ensure adequate representation across hospital categories, provinces, and Kigali City. Rwanda has four referral hospitals, all of which were included in the sample due to their national importance. In addition, all four provincial hospitals were purposively selected. District hospitals were selected using a random number table, with eleven hospitals included: two from each of the four provinces and three from Kigali City. This produced a total sample of 20 hospitals, representing approximately 42% of all hospitals in Rwanda.

Inclusion and exclusion criteria

Inclusion Criteria

Nurses and Environmental Health Officers (EHOs) formally designated as focal persons for Infection Prevention and Control (IPC) or Quality Improvement (QI).

Exclusion Criteria

Nurses or EHOs formally designated as focal persons for Infection Prevention and Control (IPC) or Quality Improvement (QI) who refused to consent to participate in the study.

Data collection procedures

The principal investigator, together with three graduate medical professionals trained in research, developed and refined the interview guide. This tool was used to collect qualitative insights on the barriers faced in implementing Risk Area 3, Safe Environment for Staff and Patients, as outlined in the Rwanda Hospital Accreditation Standards Performance Assessment Tool (3rd Edition) within public hospitals in Rwanda.[26] Data collection lasted from 15th January 2024 to 23rd March 2024.

At each of the 20 selected health facilities, two key-informant interviews (KII) were conducted. The discussions were moderated by two bachelor's degree nurses who had received formal training in qualitative research and possessed prior experience in qualitative data collection. They were assisted by a research assistant who was responsible for audio recording and taking detailed field notes during the interviews. The participants were informed about the purpose of the study, and written consent for participation and being audio-recorded was obtained from all the interviewees. Participant privacy was ensured by conducting all interviews in a private room provided by the hospital administration. Each interview was conducted in the local language, Kinyarwanda, and lasted between 45 and 70 minutes. To maintain confidentiality, participants were assigned unique identification codes in place of personal identifiers.

Analysis

Four research assistants performed the verbatim transcription of recorded audios under supervision of the PI who checked the transcripts against the original field notes and recordings in Kinyarwanda and subsequently translated into English for analysis.

Data were analyzed manually using a phenomenological framework of seven-step as defined by Colaizzi.[27] Including the first step: Transcripts were read and re-read to obtain a general sense of the whole content. The second: Significant statements that relate to the phenomenon under study were extracted from transcripts. The third step: Formulated meanings were derived from significant statements Organization. The fourth step: Organization of formulated meanings into clusters of themes and themes. The fifth step: Integration of the findings into an exhaustive description. The sixth step: Description of the fundamental structure of the phenomenon. The seventh step: Validation of the findings from the study participants.[27] The final themes were outlined through relevant quotes.

Ethical considerations

Ethical approval for this study was obtained from the Institutional Review Board of the University of Rwanda, College of Medicine, and Health Sciences (Approval No. 344/CMHS IRB/2023). Authorisation to conduct the study was further granted by the

Rwanda Ministry of Health (Ref. No. 20/12619/DPMEHF/2023). Before each interview, participants were informed about the purpose of the study and assured that participation was voluntary. Only individuals who provided informed consent were interviewed and, when applicable, had their interviews recorded with their permission. Confidentiality of all collected information was strictly maintained by assigning code numbers to participants; no personal identifiers were included in the questionnaires.

Results

Social demographic characteristics of participants

Most participants (75%) were male. Regarding educational level, 67.5% held a bachelor's degree. Nearly half of the respondents (45%) had between five and ten years of work experience, and participants aged 33 years or older accounted for 45% of the sample.

Table 1. Participants' characteristics

Variables	Type of Hospital			Total
	Referral Hospitals	Provincial Hospitals	District Hospitals	
Education Level				
Graduates' nurses and EHO	7	5	15	27
Diploma nurses	3	3	7	13
Gender				
Male	8	6	16	30
Female	2	2	6	10
Working Experience (in years)				
<4	3	1	5	9
5–10	4	4	10	18
>10	3	3	7	13
Age (in years)				
<26 years	2	1	3	6
27–32 years	3	5	8	16
≥33 years	5	2	11	18
Total number of staff	10	8	22	40

Table 2. Factors affecting the implementation of Infection Prevention and Control measures for a Safe Healthcare Environment in Rwandans' Public Hospitals

Themes	Sub-themes	Frequencies
Lack of proper infrastructure and biomedical equipment safety.	i. Absence of a management approach.	26
	ii. Lack of full responsibility regarding Biomedical equipment	40
Lack of adequate personnel	i. Lack of competent and qualified employees in quality, IPC and biomedical engineering.	36
	ii. Insufficient training in IPC & QI and biomedical engineering.	28
Lack of stable safe water sources	i. Lack of full kits to test water quality	31
	ii. Insufficient finances	40
Lack of adequate fire safety and disaster management	i. Lack of a hospital trainer in fire safety.	40
	ii. Insufficient training in fire safety	40
Lack of adequate coordination of Infection Prevention and Control measures	i. Lack of power of IPC & QI focal personnel.	36
	ii. New appointees no training	29
Lack of proper disposal of sharps and needles	i. Insufficient supply of boxes and plastic sheets	40
	ii. Inadequate disposal of sharps and needles	40
Lack of proper hand hygiene contributing to persistent healthcare-associated infections reduction of healthcare-associated infections	i. Insufficient supply of antiseptics and other hygiene materials	40
	ii. Insufficient supervision from the Environmental Health Officer (EHO)	40
Lack of proper management of hazardous materials	i. Insufficient training	40
	ii. Lack of enough spaces	40

This study explored key barriers affecting the implementation and sustainability of hospital accreditation standards in Rwanda. Analysis of the qualitative data yielded eight interrelated themes: (1) Lack of proper infrastructure and biomedical equipment safety; (2) Lack of adequate personnel; (3) Lack of stable safe water sources; (4) Lack of adequate fire safety and disaster management; (5) Lack of adequate coordination of infection prevention and control (IPC) measures; (6) Lack of proper disposal of sharps and needles; (7) Insufficient hand hygiene due to limited supplies and supervision;

and (8) Lack of proper management of hazardous materials. Together, these themes reflect systemic weaknesses in infrastructure, human resources, governance, financing, and operational processes that undermine hospitals' capacity to achieve and sustain accreditation standards.

**Theme 1: Lack of proper infrastructure and biomedical equipment safety
Absence of a structured management approach**

Participants consistently identified the absence of a clearly defined and structured management approach to hospital

infrastructure particularly biomedical equipment as a major barrier to the implementation of accreditation standards. Infrastructure was described as a foundational element of quality healthcare delivery; however, many hospitals lacked formal systems for planning, monitoring, and maintaining essential equipment as one participant emphasized, “Adequate and well-developed infrastructure forms the foundation of an effective healthcare quality system” (R6-N). The lack of systematic oversight was perceived to undermine service quality, patient safety, and sustained accreditation compliance.

Lack of a clearly defined responsibility for biomedical equipment management

The recurrent concern across interviews was the absence of clearly assigned responsibility and accountability for biomedical equipment management. Participants explained that unclear roles limited effective maintenance, delayed repairs, and hindered long-term planning. This gap was widely perceived as a threat to patient safety and accreditation requirements as one respondent noted, “The lack of clearly assigned responsibility for biomedical equipment management remains a major gap within hospitals. Roles and accountability for the management, maintenance, and monitoring of medical equipment are not explicitly defined or effectively implemented” (R4-S).

Theme 2: Lack of adequate personnel

Participants widely acknowledged that shortages in both the number and competencies of healthcare personnel significantly constrained accreditation implementation. These challenges were particularly evident within Quality Improvement (QI), Infection Prevention and Control (IPC), and biomedical engineering units.

Lack of competent and qualified staff

Respondents reported that limited numbers of trained personnel resulted in work overload, multitasking, and insufficient follow-up of accreditation activities.

Participants explained that staff was often required to assume multiple roles beyond their primary responsibilities, compromising performance and consistency, as shared by one participant:

“The implementation of accreditation standards in Rwandan hospitals is hindered by the limited number of trained personnel, including quality improvement officers, infection prevention and control focal persons, and biomedical engineers. Existing staff often shoulder multiple responsibilities, resulting in work overload and inadequate follow-up” (R3-E).

Insufficient training in IPC, QI, and biomedical engineering

Participants further highlighted substantial gaps in training, mentorship, and supportive supervision. Frequent staff turnover was reported to disrupt continuity and weaken institutional memory related to accreditation processes as one participant explained: “Frequent staff turnover undermines continuity, as newly appointed employees are often unfamiliar with accreditation requirements. In addition, capacity-building programs for accreditation are still in their early stages, and most hospitals lack structured and regular training, mentorship, and supportive supervision” (R5-E).

Theme 3: Lack of stable safe water sources

The lack of a stable and safe water supply was consistently described as a major impediment to accreditation compliance. Participants, particularly from rural hospitals, reported intermittent water availability and concerns regarding water quality, which directly affected infection prevention, sterilization processes, and environmental hygiene.

Lack of complete water-testing kits

Participants reported that incomplete water-testing kits and shortages of reagents limited routine monitoring of water quality. One respondent stated, “Reagents for testing biological and chemical parameters are lacking due to financial constraints. Only the pH test is done” (R5-KC). Similarly, shortages of biological indicators for

sterilization monitoring were reported: *“Sterilization processes are effective in most hospitals; however, we face a lack of biological marker test kits”* (R5-W).

Insufficient financial resources

Financial constraints emerged as a cross-cutting barrier affecting water safety and broader accreditation activities. Participants highlighted the absence of dedicated budgets for accreditation-related processes: *“Limited financial resources make it challenging to procure essential materials, maintain a safe environment, support data management systems, and conduct regular internal audits”* (R4-N). Others emphasized the lack of earmarked funding such as expressed by one participant, *“There is no dedicated budget line for accreditation-related activities within hospital financial frameworks, which threatens the sustainability of accreditation efforts”* (R2-E).

Theme 4: Lack of adequate fire safety and disaster management

Absence of hospital-based fire-safety trainers

The lack of designated fire-safety trainers within hospitals constrained the frequency and reach of training initiatives as echoed by one participant, *“All fire safety training programs are centrally organized and facilitated by the Rwanda National Police; no medical staff is allowed to train”* (R2-KC).

Insufficient training in fire safety

Fire-safety training was described as infrequent, typically conducted once per year. This limited staff preparedness, particularly for those unable to attend scheduled sessions. As one participant noted, *“The training is typically conducted once per year. Healthcare workers who miss the training must wait an entire year, which affects institutional preparedness”* (R8-KC).

Theme 5: Lack of adequate coordination of infection prevention and control measures

Weak coordination of IPC activities was consistently identified as a major barrier to accreditation compliance.

Limited authority (power) of IPC and QI focal personnel

Participants reported that IPC and QI focal persons often lacked the authority to enforce compliance across departments and professional hierarchies. Fragmented communication and weak follow-up mechanisms further undermined IPC implementation. One participant explained, *“Key barriers include inadequate authority of IPC focal persons, fragmented communication between departments, and insufficient follow-up of audits and hand hygiene monitoring”* (R7-W).

Frequent staff changes and insufficient training

Frequent rotation of IPC and QI focal persons disrupted program continuity. Newly appointed staff was often reported to lack formal training as noted by one participant, *“Frequent changes in QI and IPC focal persons have significantly weakened infection control efforts”* (R1-S). Another participant emphasized the need for structured induction: *“All newly appointed staff should receive formal training in infection prevention and control and quality improvement”* (R7-N).

Theme 6: Lack of proper disposal of sharps and needles

Improper disposal of sharps and needles was reported as a persistent challenge affecting occupational safety and accreditation compliance.

Insufficient supply of safety boxes and materials

Participants reported shortages of safety boxes and protective materials due to budgetary constraints. One participant stated, *“Hospitals receive a limited supply of safety boxes for sharps disposal, which must be shared across multiple facilities, often resulting in shortages”* (R7-E).

Inadequate disposal practices

Delayed disposal and non-adherence to recommended standards were commonly reported.

One participant stressed, *“We have suffered from a scarcity of boxes to dispose of used sharps and needles, which causes inadequate elimination”* (R7-KC). Another respondent explained, *“Containers should be disposed of when they reach three-quarters full, but cleaners often wait until they overflow, which causes incidents”* (R1-W).

Theme 7: Insufficient hand hygiene due to limited supplies and supervision

Participants reported that inadequate supplies of antiseptics and hygiene materials, combined with weak supervision, contributed to persistent healthcare-associated infections.

Insufficient supply of antiseptics and hygiene materials

Frequent stock-outs and irregular supply chains disrupted routine hand hygiene practices. Participants also highlighted poor compliance by contracted cleaning companies. One respondent argued, *“Company managers tend to provide inadequate cleaning materials such as liquid soap and heavy-duty gloves, forcing cleaning staff to use hospital-provided gloves and increasing costs”* (R4-KC).

Insufficient supervision

Heavy workloads and limited logistical support reduced the effectiveness of supervision by Environmental Health Officers (EHOs) and IPC teams. One participant asserted, *“When supervision is irregular, environmental health risks such as poor waste disposal or contamination may go undetected”* (R5-S). Another participant added, *“We face heavy workloads and limited logistical support, which reduce the effectiveness of our oversight”* (R6-E).

Theme 8: Lack of proper management of hazardous materials

Participants identified inadequate hazardous materials management as a significant barrier to safe hospital operations and accreditation compliance.

Insufficient training in hazardous materials management

Participants reported a shortage of specialised expertise and limited training opportunities, resulting in hazardous materials being managed using basic precautions. One participant explained, *“What we do is mainly labeling hazardous materials and putting notices on how to handle them, but departments like maternity have frequent spills”* (R1-E).

Training was described as infrequent and largely informal: *“Training is conducted once per year and relies on senior staff transferring limited knowledge to newcomers. We propose two to four refresher trainings annually to ensure adequate competency”* (R3-S).

Inadequate storage space for hazardous materials

Many hospitals lacked designated and adequately equipped storage areas, forcing hazardous materials to be stored in unsafe or shared spaces. As one participant reported, *“Our facility lacks designated storage areas for hazardous waste, and materials are often kept in unsuitable or shared spaces, posing risks of cross-contamination and occupational exposure”* (R3-KC).

Discussion

The absence of adequate infrastructure and safe biomedical equipment significantly affects the ability of health facilities to meet accreditation standards. Infrastructure forms the backbone of quality healthcare delivery, and when facilities operate in outdated or poorly maintained buildings, it becomes difficult to ensure compliance with essential safety and quality protocols. Similarly, unsafe or malfunctioning biomedical equipment compromises diagnostic accuracy and the safety of both healthcare providers and patients. This finding is consistent with studies from Rwanda, where structural deficiencies were among the most cited barriers to accreditation compliance, underscoring the need for substantial investment in facility upgrades and equipment maintenance systems.

Findings from Rwanda [3] and Iran [19,26] also showed that insufficient staffing reduces compliance with accreditation requirements. This similarity can be explained by workforce shortages, high attrition, and uneven distribution of skilled staff across facilities. When personnel are overworked, documentation, supervision, and adherence to policies become secondary to urgent clinical tasks. This weakens the foundation of quality assurance. The implication is that accreditation demands cannot be met without strengthening human resource capacity. Recommendations include recruitment of additional staff, continuous professional development, and task-shifting strategies where appropriate.

The lack of competent personnel and adequately trained medical staff necessary to deliver quality healthcare was a major challenge. Many healthcare facilities did not adhere to any recognized authority or framework for implementing quality standards. Additionally, deficiencies in medical equipment, ineffective management approaches, limited training opportunities for healthcare professionals, and the presence of unqualified personnel in some hospitals contributed to suboptimal quality standards and weak health system performance. The findings of this study highlight that hospitals with poor performance and limited qualifications should adopt and apply accreditation standards, as this was identified as a key factor in improving healthcare quality. These findings are in the same line with other studies conducted in Rwanda, and Iran, which encouraged the accreditation as a way to optimize the service quality.[3,28]

The results from this study revealed that limited financial resources, restricted budgets, high staff turnover, and weaknesses in management and leadership were major challenges to the implementation of quality standards in public hospitals in Rwanda. These findings are consistent with a study conducted in Lebanon which also identified financial and human resource limitations as key barriers to quality improvement.[29]

Similarly, the results align with a systematic review conducted in 2007, which reported that budgetary constraints and inadequate funding are significant obstacles to establishing effective quality systems in healthcare settings.[30]

Most of participants believed that healthcare professionals' adherence to important IPC behaviors, such hand hygiene, could not be improved by training alone. In addition to in-service training, they underlined the necessity of monitoring, follow-up, and change interventions. These evidences also were narrated by Naikoba and Hayward who discovered that hand hygiene education programs alone had little effect on compliance over the long run.[29] Additionally, multiple strategies that combined instruction with written materials, reminders, and ongoing feedback proved to be the most successful. [30] In several LMICs, notably in Rwanda, hand hygiene compliance has been reported to be considerably increased by implementing WHO's multimodal improvement strategy .[30]

In this study, another major obstacle to effective Infection Prevention and Control (IPC) was inadequate hand hygiene compliance. This issue is not unique to the studied settings but is widely recognized as a significant contributor to the transmission of healthcare-associated infections (HAIs) globally.[31] However, the implementation of appropriate Infection Prevention and Control (IPC) strategies and effective planning can prevent a substantial proportion of healthcare-associated infections (HCAIs).[32] In addition, patient safety is compromised by inadequate ventilation systems in specialized care units, including operating rooms, as well as by substandard water supply systems and the improper use of disinfectants.[33]

All participants emphasized that designated areas for handling hazardous materials should be adequately equipped to manage various categories of dangerous substances. These include flammable liquids with a flash point below 100°F, flammable solids that may not readily

ignite but can burn intensely, radioactive materials, toxic gases, oxidizing agents that release oxygen or otherwise promote combustion, explosive materials capable of detonation or rapid combustion, compressed gases stored under pressure irrespective of their flammability, and corrosive substances capable of causing severe tissue damage upon contact.[34] These materials are dangerous and to handle them correctly need serious training. Unfortunately, this training in Rwanda is not affordable, and the space to handle needs also a special area.[34] The likelihood of exposure to non-radioactive hazardous substances is considerably higher than that of radioactive materials. Any incident involving hazardous substances should be classified as an emergency and promptly reported to hospital leadership to ensure appropriate and specialized management.

According to participants in this study, Rwanda could substantially reduce the incidence of healthcare-associated infections (HAIs) if the issue were prioritized on the national health agenda, similar to approaches adopted in other countries such as the United States, where HAI prevention programs are coordinated by the Department of Health and Human Services (HHS).[35] Numerous studies have demonstrated that the prevention of healthcare-associated infections (HAIs) requires a multifaceted approach, incorporating interventions such as effective hand hygiene practices, robust surveillance systems, active patient involvement, collaboration with laboratory services, proper environmental sanitation, and the implementation of antimicrobial stewardship programs.[36]

In addition, strong managerial support and sustained government commitment are essential for the effective prevention of HAIs. Furthermore, educational initiatives that enhance knowledge and awareness among healthcare workers and the public can foster positive attitude changes and contribute to a reduction in the incidence of HAIs.[33]

Strengths and limitations of the study

Strengths

This study has several notable strengths. It represents the fourth comprehensive assessment of the implementation of hospital accreditation standards in public hospitals in Rwanda. Several key publications have contributed to this field. First, the 2019 study by Binagwaho et al., *“Creating a Pathway for Public Hospital Accreditation in Rwanda”*, outlines Rwanda's approach to developing a national hospital accreditation system aimed at improving healthcare quality and patient safety. Second, the study *“The Impact of Hospital Accreditation on Health Utilization and Outcomes in Rwanda: An Interrupted Time Series Analysis”* (published September 2025) evaluates the effects of hospital accreditation on health service utilization and outcomes in Rwanda, using data from 2020 to 2024. Third, the 2023 study *“Accreditation and Health Service Delivery in King Faisal Hospital, Kigali”* examines the impact of accreditation on healthcare quality at King Faisal Hospital, highlighting improvements in service delivery post-accreditation. While these studies provide valuable insights, the overall number of accreditation-focused publications in Rwanda remains limited. Further research is therefore needed to comprehensively assess the impact and challenges of accreditation across diverse healthcare settings in the country. Notably, the present study focuses on Risk Area 3, providing updated evidence on the status of this area in public hospitals in Rwanda.

Limitations

This study also has several limitations. First, its cross-sectional design does not allow for the establishment of causal relationships between accreditation implementation and hospital performance outcomes. Second, data collection relied partly on self-reported information from healthcare providers which may have introduced response bias. Third, the study was limited to public hospitals, and therefore the findings may not fully represent practices in private or faith-based health facilities.

Additionally, financial and logistical constraints limit the possibility of conducting follow-up assessments to evaluate the long-term impact of accreditation. Despite these limitations, the study provides valuable insights into the status of accreditation implementation and offers a solid foundation for future research and policy interventions.

Conclusion

This study demonstrates that the implementation of accreditation standards in public hospitals in Rwanda remains uneven, with significant gaps in infrastructure, trained personnel, and management support. Addressing these challenges through strengthened government commitment, adequate financial and human resources, and targeted training programs could substantially improve healthcare quality and patient safety. The findings provide a valuable evidence base for policymakers and hospital administrators to prioritize accreditation initiatives and guide strategies for sustainable quality improvement. Future studies should evaluate the long-term impact of accreditation on hospital performance and patient outcomes to inform ongoing efforts in the Rwandan healthcare system. Further research is needed to comprehensively assess the impact and challenges of accreditation across various healthcare settings in the country.

Author Contributions

All authors have reviewed the last version to be published and agreed to be accountable for all aspects of the work.

Conflicts of interest

None.

Payment

All authors declare that no financial support was received from any organisation for this work.

This article is published open access under the Creative Commons Attribution-NonCommercial NoDerivatives (CC BYNC-ND4.0). People can copy and redistribute the article only for noncommercial purposes and as long as they give appropriate credit to the authors.

They cannot distribute any modified material obtained by remixing, transforming or building upon this article. See <https://creativecommons.org/licenses/by-nc-nd/4.0/>

References

1. Verma M. Accreditation of Healthcare Organizations and its Role in Improving and Maintaining Quality Patient Care. *Contemporary Clinical Dentistry*. 2022;13(4):295-296. https://doi.org/0.4103/ccd.ccd_489_22
2. Rotz P, Cross D, Belabbes EH, et al. Accreditation Process Improving the Quality of Laboratory Systems in the African Region. *American Journal of Clinical Pathology*. 2010:393-400. <https://doi.org/10.1309/ajcptuuc2v1wjqbm>
3. Binagwaho A, Scott KW, Dushime T, et al. Creating a pathway for public hospital accreditation in Rwanda: progress, challenges and lessons learned. *International Journal for Quality in Health Care*. 2020;32(1):76-79. <https://doi.org/10.1093/intqhc/mzz063>
4. Krishnamoorthy Y, Subbiah P, Rajaa S, et al. Barriers and Facilitators to Implementing the National Patient Safety Implementation Framework in Public Health Facilities in Tamil Nadu: A Qualitative Study. *Global Health: Science and Practice*. 2023;11(6):e2200564. <https://doi.org/10.9745/GHSP-D-22-00564>
5. Alsubahi N, Pavlova M, Alzahrani AA, Ahmad A, Groot W. Healthcare Quality from the Perspective of Patients in Gulf Cooperation Council Countries: A Systematic Literature Review. *Healthcare*. 2024;12(3):315. <https://doi.org/10.3390/healthcare12030315>
6. Mansoor T, Wan Puteh SE, Aizuddin AN, Malak MZ. Challenges and Strategies in Implementing Hospital Accreditation Standards Among Healthcare Professionals in Healthcare Systems in Yemen: A Phenomenological Study. *Cureus*. 2024;16(4). <https://doi.org/10.7759/cureus.59383>

7. Hinchcliff R, Greenfield D, Westbrook JI, Pawsey M, Mumford V, Braithwaite J. Stakeholder perspectives on implementing accreditation programs: a qualitative study of enabling factors. *BMC Health Services Research*. 2013;13(1):437. <https://doi.org/10.1186/1472-6963-13-437>
8. Gartke K, Roffey DM, Dobransky J, et al. Continuous Quality Improvement in Orthopaedic Surgery: Improving Patient Experience, Safety and Outcomes. *University of Ottawa Journal of Medicine*. 2017;7(1). <https://doi.org/10.18192/uojm.v7i1.2003>
9. Dharmagunawardene D, Avery M, Bowman P, Greenfield D, Hinchcliff R. Sustainability of Hospital Accreditation Programs in Low and Middle-Income Countries: Lessons learned from Sri Lanka. *Asia Pacific Journal of Health Management*. 2024;19(2):1-9. <https://doi.org/10.24083/apjhm.v19i2.3903>
10. Gutiérrez JP, Rodríguez MA, Torres-Pereda P, Reyes-Morales H. Hospital accreditation in Mexico fails to improve the quality of healthcare: lessons from an impact evaluation. *Frontiers in Public Health*. 2024;12(June). <https://doi.org/10.3389/fpubh.2024.1386667>
11. Holmes K, McCarty J, Steinfeld S, Boston K. Bridging the Gap: Specialized Training Programs for Infection Prevention Specialists Increase Certification Success. *Antimicrobial Stewardship & Healthcare Epidemiology*. 2024;4(S1):s107-s108. <https://doi.org/10.1017/ash.2024.258>
12. Loftus MJ, Curtis SJ, Naidu R, et al. Prevalence of healthcare-associated infections and antimicrobial use among inpatients in a tertiary hospital in Fiji: A point prevalence survey. *Antimicrobial Resistance and Infection Control*. 2020;9(1):1-8. <https://doi.org/10.1186/s13756-020-00807-5>
13. Haque M, McKimm J, Sartelli M, et al. Strategies to Prevent Healthcare-Associated Infections: A Narrative Overview. *Risk Management and Healthcare Policy*. 2020;Volume 13(1):1765-1780. <https://doi.org/10.2147/RMHP.S269315>
14. WHO. Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Health Care Facility Level. *WHO Library Cataloguing-in-Publication Data*. 2016. <https://iris.who.int/server/api/core/bitstreams/3056b988-44f9-490a-a0afc77360544ffe/content>. Accessed on 11th December 2025.
15. Tomczyk S, Storr J, Kilpatrick C, Allegranzi B. Infection prevention and control (IPC) implementation in low-resource settings: a qualitative analysis. *Antimicrobial Resistance & Infection Control*. 2021;10(1):113. <https://doi.org/10.1186/s13756-021-00962-3>
16. Manchanda V, Suman U, Singh N. Implementing Infection Prevention and Control Programs When Resources Are Limited. *Current Treatment Options in Infectious Diseases*. 2018;10(1):28-39. <https://doi.org/10.1007/s40506-018-0142-3>
17. Danasekaran R, Mani G, Annadurai K. Prevention of healthcare-associated infections: protecting patients, saving lives. *International Journal of Community Medicine and Public Health*. 2014;1(1):67. <https://doi.org/10.5455/2394-6040.ijcmph20141114>
18. Jha AK, Prasopa-Plaizier N, Larizgoitia I, Bates DW. Patient safety research: an overview of the global evidence. *Quality and Safety in Health Care*. 2010;19(1):42-47. <https://doi.org/10.1136/qshc.2008.029165>
19. Greenfield D, Pawsey M, Hinchcliff R, Moldovan M, Braithwaite J. The standard of healthcare accreditation standards: a review of empirical research underpinning their development and impact. *BMC Health Services Research*. 2012;12(1):329. <https://doi.org/10.1186/1472-6963-12-329>
20. Vali L, Mehrolhasani MH, Mirzaei S, Oroomiei N. Challenges of implementing the accreditation model in military and university hospitals in Iran: a qualitative study. *BMC Health Services Research*. 2020;20(1):698. <https://doi.org/10.1186/s12913-020-05536-4>

21. MoH. Rwanda Health Sector Performance Report 2017-2019. Ministry of Health Rwanda. *MoH*. 2020:1-95. https://www.moh.gov.rw/fileadmin/user_upload/Moh/Publications/Reports/FINAL_Annual_Report_2017-2019_02062020.pdf. Accessed 16 Dec 2025
22. Fochtman D. Phenomenology in Pediatric Cancer Nursing Research. *Journal of Pediatric Oncology Nursing*. 2008;25(4):185-192. <https://doi.org/10.1177/1043454208319186>
23. Moran D. Husserl's Crisis of the European Sciences and Transcendental Phenomenology. *Cambridge University Press*. 2012. <https://doi.org/10.1017/CBO9781139025935>
24. Mills J, Birks M. *Qualitative Methodology: A Practical Guide*. SAGE Publications, Inc. 2014. <https://doi.org/10.4135/9781473920163>
25. Sathyanarayana S. T., Mohanasundaram, PBV, & Harsha H. Selecting the right sample size: Methods and considerations for social science researchers. *International Journal of Business and Management Invention*. 13(7), 152-167. 2024;13(7):152-167. <https://doi.org/10.35629/8028-1307152167>
26. MoH Rwanda. Rwanda Hospital Accreditation Standards. 3rd ed. Rwanda. MOH. 2022:56. <https://www.moh.gov.rw/index.php?eID=dumpFile&t=f&f=92583&token=b35d4ced4fee726a3225595e6702f2e5c7661f09>
27. Praveena K.R, Sasikumar S. Application of Colaizzi's Method of Data Analysis in Phenomenological Research. *Medico Legal Update*. 2021;21(2):914-918. <https://doi.org/10.37506/mlu.v21i2.2800>
28. Janati A, Ebrahimoghli R, Ebadi A, Toofan F. Hospital Accreditation: What Difficulties Does It Face in Iran? *Global Journal of Health Science*. 2016;9(1):254. <https://doi.org/10.5539/gjhs.v9n1p254>
29. Naikoba S, Hayward A. The effectiveness of interventions aimed at increasing handwashing in healthcare workers - a systematic review. *Journal of Hospital Infection*. 2001;47(3):173-180. <https://doi.org/10.1053/jhin.2000.0882>
30. World Health Organization. A Guide to the Implementation WHO Multimodal Hand Hygiene Improvement Strategy. WHO. 2009 *WHO/IER/PSP/2009/02*. <https://www.who.int/publications/i/item/a-guide-to-the-implementation-of-the-who-multimodal-hand-hygiene-improvement-strategy>. Accessed 16 Dec 2025
31. Loftus MJ, Guitart C, Tartari E, et al. Hand hygiene in low- and middle-income countries. *International Journal of Infectious Diseases*. 2019;86:25-30. <https://doi.org/10.1016/j.ijid.2019.06.002>
32. Haque M, McKimm J, Sartelli M, et al. Strategies to Prevent Healthcare-Associated Infections: A Narrative Overview. *Risk Management and Healthcare Policy*. 2020;Volume 13:1765-1780. <https://doi.org/10.2147/RMHP.S269315>
33. Allegranzi B, Pittet D. Role of hand hygiene in healthcare-associated infection prevention. *Journal of Hospital Infection*. 2009;73(4):305-315. <https://doi.org/10.1016/j.jhin.2009.04.019>
34. Liu L, Li J, Zhou L, Fan T, Li S. Research on Route Optimization of Hazardous Materials Transportation Considering Risk Equity. *Sustainability*. 2021;13(16):9427. <https://doi.org/10.3390/su13169427>
35. Kahn KL, Mendel P, Weinberg DA, Leuschner KJ, Gall EM, Siegel S. Approach for Conducting the Longitudinal Program Evaluation of the US Department of Health and Human Services National Action Plan to Prevent Healthcare-associated Infections. *Medical Care*. 2014;52(Supplement 1):S9-S16. <https://doi.org/10.1097/MLR.0000000000000030>
36. Aboelela SW, Stone PW, Larson EL. Effectiveness of bundled behavioural interventions to control healthcare-associated infections: a systematic review of the literature. *Journal of Hospital Infection*. 2007;66(2):101-108. <https://doi.org/10.1016/j.jhin.2006.10.019>