

Level of Emergency Preparedness and Associated Barriers at the Accident and Emergency Ward of a LMIC Hospital: A Cross-Sectional Assessment Using the WHO HEAT Tool

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Background: Emergency preparedness is a challenge for hospital emergency departments (EDs). In the USA, over 68% of 983 EDs were not emergency prepared, while in Ghana, one hospital's emergency preparedness level was only 57.4%. At the health facility level, several barriers to emergency preparedness have been reported, including poor access to medical supplies, medications, and equipment; deficits in medical training; and the absence of formal clinical management protocols.

Methodology: A cross-sectional study was conducted at the Accident and Emergency (A&E) Ward of Mbarara Regional Referral Hospital (MRRH). Data was collected using the modified WHO HEAT checklist, completed by three (3) key hospital informants, who were preferred for their key insights over a large sample of general staff. Data fell into 11 variables with items in each variable scored between 0 and 2, then the total scores generated percentages. By univariate analysis, the level of emergency preparedness and the associated barriers at the A&E Ward of MRRH were determined.

Results: The overall emergency preparedness score at the A&E ward of MRRH was 62.6%, with the human resources category under ED capacity scoring the lowest (37.5%), while the consulting services category under ED resources scored the highest (71.4%). The two most common associated barriers to emergency preparedness in the A&E were medicine stockouts (35.0%) and missing emergency equipment (29.2%), while the least reported barriers were user fees (2.2%), and opening hours (0.7%).

Conclusion: According to this study, the level of emergency preparedness in the A&E ward of MRRH was weak, with low level of human resource, and weak quality improvement checks the most contributing factors. The highest reported barriers to strong emergency preparedness in the A&E ward of MRRH were medication stockouts and the absence of emergency equipment.

Keywords: emergency preparedness, barriers, accident & emergency ward/emergency department, emergency medical services, emergency medical system

Introduction

“Emergency preparedness” refers to the ability and knowledge to anticipate, detect, and respond to a potential or ongoing health adversity.¹ Consequently, to effectively anticipate and manage health emergencies, a hospital's Emergency Department (ED) needs advance preparation (emergency preparedness) in the form of the necessary emergency capacity and resources.^{2–4} ED capacity refers to the ability to scale up emergency care using available space, staffing, and systems, while ED resources are the tangible assets and services available to deliver emergency care.^{5,6} Therefore, a hospital's ED capacity and resources may be evaluated in terms of human resources (staffing levels and training in emergency care skills), clinical services (protocols that guide clinical processes), and signal/key functions (ABCDE acronym-guided).⁶

Studies show that EDs both in High Income Countries (HICs) and Low and Middle Income Countries (LMICs) struggle to meet standard emergency preparedness levels. In the USA, of 983 EDs handling children, the study found that



over 68% of these EDs were not sufficiently organized to handle the emergencies successfully.⁷ Similarly, in Africa, a hospital ED emergency preparedness study conducted at a University hospital in Ghana revealed a poor emergency preparedness level, scoring only 57.36%.⁴ These findings are significant because low ED emergency preparedness correlates with a worse likelihood of surviving any emergency.^{8,9} This fact is exemplified by one study's findings; children managed with trauma in hospital EDs with the highest quartile of Pediatric ED emergency readiness (quartile 4, score >88) had a 76% lower mortality rate than those in the lowest quartile (quartile 1, score <58).⁷

Similarly, as a result of poor health care service and infrastructure investment made by LMICs relative to HICs, LMICs report higher emergency conditions mortality rates.¹⁰ A study done in a LMIC hospital indicated a health emergencies mortality rate of about 2%, whereas a HIC hospital study reported a health emergencies mortality rate of about 0.3%, 7 times lower.^{11,12}

A number of barriers to a health facility's ability to build adequate emergency capacity and resources have been studied. The barriers include poor access to medical supplies, medications and equipment, deficits in medical training, and the absence of formal clinical management/process protocols.⁶ While other studies cite barriers beyond health facilities scope, such as low human resource capacity, lack of national policies and guidelines and poor coordination of emergency medical services.¹³

A study supported by the Ministry of Health (MoH) Uganda recorded a poor state of emergency capacity and resources (emergency preparedness) countrywide. The study observed that of 163 health facilities studied, about 55% lacked the most basic in-hospital equipment required to handle medical emergencies, and over 90% of the medical staff in emergency care settings lacked adequate emergency care training.¹³ Therefore, in a bid to improve the state of emergency medical services (EMS), the MoH – EMS division set up the Uganda national EMS policy with key intervention pillars like essential emergency care package for all health facilities, emergency care health infrastructure, and human resources for emergency medical services.¹⁴ In spite of the above MoH Uganda interventions, the study site Mbarara Regional Referral Hospital (MRRH) suffers from frequent stock outs of key pharmaceuticals, inadequate medical staffing, and poor central government financing.¹⁵

Furthermore, there is no documentation of the level of emergency preparedness of the Accident & Emergency ward (A&E ward or ED) at MRRH, nor could such information be traced in research literature about other major hospitals in Uganda. Therefore, the above local findings coupled with the paucity of literature on hospital ED's level of emergency preparedness and associated barriers in the African setting moved the researchers to conduct this study at the A&E ward of MRRH, in a LMIC.

Methods

Design and Setting

The study design used was a facility-based quantitative descriptive cross-sectional study of the A&E ward at MRRH, the main government tertiary health institution in South Western (SW) Uganda, from 1st to 30th June 2025.

Study Population, Inclusion and Exclusion Criteria

The hospital medical staff who work at the A&E ward formed the study population, from these 3 key informants were selected. Key informants have insider knowledge about core hospital systems and resources and are therefore better placed to explain why certain gaps exist. Eligible to participate were senior staff from Records, Nurses, and Doctors with a work experience of over 2 years at the ward. The study excluded junior staff as well as non-managerial senior staff from the three representative health care cadres at the A&E ward.

Sampling Procedure

This was purposive sampling, where only A&E health care cadre managers from Records (A&E records in-charge), Nursing (Nurse In-charge) and Doctors (Emergency physician in-charge) were selected to participate in the study.

Study Variables

The dependent variable was the level of emergency preparedness at the A&E ward, while the independent variables were A&E capacity and resources.

Data Collection Tool and Procedure

The study tool used was the standardized WHO Hospital Emergency Unit Assessment Tool (WHO HEAT). The WHO HEAT evaluates the structure, capacity and key functions of hospital emergency units. The study tool comprises four (4) assessment categories: facility characteristics, human resources, clinical services, and signal functions.¹⁶ The tool also has four types of questions: (1) Open-ended (eg, type of facility), (2) Numbers (eg, number of ED beds), (3) Discrete (eg, Yes or No), and (4) Rating (eg, 0, 1 or 2). For use in this study, the WHO HEAT was modified by adding a fifth (5th) assessment category: emergency care equipment and medications and a percentage score tab for each of the five (5) assessment categories (for performance measurement). These study tool modifications were guided by guidelines from the Uganda essential medicines checklist 2020 and the WHO generic essential emergency equipment list.^{2,17}

Three (3) key hospital informants who work at the A&E ward of MRRH were purposively selected to participate. They filled out a written informed consent in English prior to completing a self-administered questionnaire (WHO HEAT) over a period of 30 days. The modified WHO HEAT was divided into 3 parts: 1.0–1.29, filled by the A&E ward records personnel in-charge; 1.3, 2.0–2.1.12, 2.2.0–2.2.7, 3.0–3.5.7, filled by the nurse in-charge, and 1.4.0–1.4.17, 4.0–5.2.55, filled by the doctor in-charge. Background checks were done for quantifiable study tool assessed items through direct observation.

Where applicable, each of the questions was rated from 0 to 2; scored as 0 – Unavailable, 1 – Available (to some), and 2 – Available and Adequate (to most). Wherever a resource disposal was less than adequate (score <2), a reason to explain its inadequacy was evaluated as well. Furthermore, both numerical and percentage scores were obtained per category, that later fed into an overall WHO HEAT numeric and percentage score to give the cumulative level of emergency preparedness. This was then interpreted as “weak” if scored 33.3–66.6% and “strong” if 66.7% - 100%, based on a scale in an earlier study that measured hospital emergency preparedness in a LMIC.¹⁸

Quality Control

The modified HEAT was reviewed by 3 emergency care experts (two emergency physicians and an emergency care nurse), with a scale-level CVI (S-CVI) of approximately 1, where their suggestions and modifications were adapted to the final tool. Thereafter, it was pretested at a health facility (Kabale Regional Referral Hospital) with similar study settings to the study site, and then final modifications were made to the tool for simplicity. The researchers sought ethical approval from the Research and Ethics Committee of Mbarara University of Science and Technology (MUST-REC), approval number MUST-2025-2031. The MUST-REC is under supervision by the Uganda National Council for Science and Technology (UNCST) with guidelines aligned to the Helsinki declaration. Additionally, administrative clearance was obtained from the MRRH hospital administration.

Data Management and Analysis

Data was thereafter, extracted from the tool into Microsoft excel v.2016, cleaned, and analyzed. Basic descriptive statistics were generated, categorical variables were reported in the form of proportions and frequencies (percentages), then presented in tables for descriptive analysis.

Results

Facility Characteristics

The tertiary facility MRRH, receives 28,210 hospital visits annually; however, close to 70% (19,806) are A&E visits, thus the A&E shoulders the largest patient burden. The total A&E ward beds were 24, available to admit close to 55 patients a day (1 bed for every 2.3 patients); whereas the ICU had 10 beds of which only 7 were functional to receive patients, far below the recommended 5% of total hospital beds (350). The A&E, Laboratory and Theatres (2 functional

Table 1 Facility Metrics at MRRH

Descriptor	Hospital Visits/Year	OPD Visits/Year	ED Visits/Year	ED Beds	In-Patient Admissions	In-Patient Beds	Hours Open	
Numbers	28,210	8404	19,806	24	11,404	350	12 *PR	24 *A,L,T

Abbreviations: *P, Pharmacy; R, Radiology; A, Accident & Emergency; L, Laboratory; T, Theatre.

theatres) at MRRH were the only patient entry/service areas open day and night (24/7) while the Pharmacy and Radiology units worked only 12 hours a day (see Table 1). Similarly, the A&E staff duty covered 24 hours a day; however, senior staff of all clinical cadres worked 8 hours a day and stay on call for the rest of the hours in the day (especially so among doctors).

A&E Capacity (Human Resource, Protocols, and Quality Improvement)

In human resources (HR) assessment, the A&E at MRRH maintains a fixed number of non-rotating staff. However, the unit grapples with inadequate staffing levels in the permanent category, both the nurses' (14) and doctors' (1) cadres, scoring 0.0% for inadequacy, while training of the medical staff in the provision of emergency medical services (skills - BLS/ALS) scored 66.7%, thus the average HR score was low, 37.5%.

Similarly, the protocols that direct clinical work at the A&E MRRH had a low cumulative score of 56.7%. The poorly implemented protocols were clinical management at 25%, disposition and outside transfer protocols at 50%, respectively.

The A&E had a standardized patient information registry as well as a standardized electronic clinical chart, scoring excellently, 100%. However, clinical audits were sporadically done, and the tracking of quality improvement actions from audits was weak; a cumulative drop score of 50%. Furthermore, no recorded external supervisory visit had been carried out to the A&E at MRRH in the last 6 months (see Table 2).

Table 2 Showing ED – Human Resource, Protocols and Quality Improvement

Variable	Percentage Score
Human Resource (Items):	
Fixed staff assigned to the ED (01)	01/01
Nurses (02)	00/02
Doctors (02)	00/02
Training in EMS (03)	02/03
Totals Human Resource	03/08 (37.5%)
Protocols (Items):	
Triage, Surveillance, Communication, Emergency response (mass casualty) protocols (04)	04/04
Clinical management protocols (08)	02/08
Condition specific management protocols (06)	04/06
Disposition protocols (04)	02/04
Outside transfer protocols (02)	01/02
Safety protocols (06)	04/06
Totals Protocols	17/30 (56.7%)
Quality Improvement (Items):	
Trauma Registry (01)	01/01
Clinical QI meetings and Clinical Audits (02)	01/02
Clinical Document template (01)	01/01
Supervision (03)	00/03
Totals Quality Improvement	03/07 (42.9%)

Notes: Rating: 0 – Unavailable or Inadequate, 1 – Available or Adequate.

A&E Resources (Infrastructure, Equipment, Medications & Services)

The infrastructure at the A&E MRRH scored well close to 71% on the study tool checklist, while an assessment of the basic equipment had a low score of just 38.9%. These two assessments gave an average percentage score of 57.1%. Emergency equipment availability at the A&E MRRH was very poor in the area of circulation management at 37.5%, fairly available in areas of breathing/airway/disability and exposure management all above 62%, while PPEs availability was very well covered at 83.3%. The most available emergency medications were Poison/Antidotes and antibacterials, at a score of 83.3%, while the least available medications were anesthetics, mineral drugs, anticonvulsants, drugs for pulmonary disorders, and antiseptics/disinfectants, at a score of 50% correspondingly. Thus, the collective emergency medication availability score was average, at 63.4% (see [Table 3](#)).

The services assessed in the A&E ward were diagnostics, ancillary, clinical, consultation, and interventions (signal functions). Among diagnostic services, point-of-care testing scored the lowest at 37.5%, while imaging and laboratory testing scored 66.7% and 62.5%, respectively. In ancillary services, the A&E struggles with in-house patient transportation and poor security provision, both at 50%. The A&E at MRRH is fairly well supported with consultation specialists, scoring 71.4%.

Furthermore, the most poorly performed signal function was obstetric intervention at 50.0%, while most other signal functions scored well, yielding an average of 70.1% (see [Table 4](#)). In clinical services, only about 10% of patients arriving by ambulance have trained staff on board. The A&E had a designated triage area operating daily and for all hours of the day. It also had a standardized triage tool with time targets for each category. However, the A&E used only triage protocols for adults, with none for children <5 years or for pregnant women.

Table 3 Showing ED Infrastructure, Equipment, Medications

Variable	Percentage Score
Infrastructure & Basic Equipment (Items)	
Infrastructure (12)	17/24
Basic Equipment (09)	07/18
Totals of Infrastructure & Basic Equipment	24/42 (57.1%)
Essential Emergency Equipment (Items)	
Airway management (07)	09/14
Breathing management (07)	09/14
Circulation management (08)	06/16
Disability and Exposure management (06)	06/12
PPE (06)	10/12
Totals Emergency Equipment	40/68 (58.8%)
Emergency Medications (Items)	
Antiseptics & disinfectants (02)	02/04
Pulmonary disorders (03)	03/06
Anaphylaxis (02)	03/04
Cardiovascular disorders (07)	09/14
Gastrointestinal disorders (03)	04/06
Pain, fever, inflammation (03)	04/06
Diuretics (02)	03/04
Fluid, Blood products (05)	07/10
Anticonvulsants (03)	03/06
Antibacterials (03)	05/06
Poisoning/Antidote (03)	05/06
Minerals (02)	02/04
Anesthetics (03)	03/06
Totals Emergency Medication	52/82 (63.4%)

Notes: Rating: 0 – Unavailable, 1 – Available, 2 – Adequate.

Table 4 Showing ED Services (Diagnostic, Ancillary, Clinical, Consulting & Interventions)

Variable	Percentage Score
Diagnostics (Items)	
Laboratory-based testing (12)	15/24
Point of care testing (05)	03/10
Diagnostic imaging (06)	08/12
Totals Diagnostics	26/46 (56.5%)
Ancillary Services (Items)	
Social work services (01)	02/02
Patient transport services (within emergency unit) (01)	01/02
Security (01)	01/02
Totals Ancillary Services	04/06 (66.7%)
Clinical Services (Items)	
Access (04)	04/04
Triage (06)	03/06
Totals Clinical Services	07/10 (70%)
Consulting Services (Items)	
Specialties (07)	10/14 (71.4%)
Totals Consulting Services	10/14 (71.4%)
Interventions - Signal Function Performance (Items)	
Vital Signs (02)	03/04
Airway Interventions (06)	09/12
Breathing Interventions (09)	13/18
Circulation Interventions (21)	27/42
Neurologic Interventions (12)	18/24
Sepsis Intervention (04)	06/08
Trauma Interventions (10)	15/20
Obstetric Interventions (03)	03/06
Totals Interventions	94/134 (70.1%)

Notes: Rating: 0 – Unavailable, 1 – Available, 2 – Adequate.

In summary, the highest performing category assessed at the A&E was consulting services at 71.4%, whereas the lowest category was human resources at 37.5%. Therefore, the overall emergency preparedness score at the A&E ward MRRH was 62.6%, which fell in the classification of “weak” emergency preparedness (see Table 5).

Table 5 Overall Emergency Preparedness Score (ED Capacity and Resources)

Variable	Number of Items	Score Obtained	Percentage Score	Preparedness Level
Human Resources	08	03/08	37.5%	Weak
Protocols	30	17/30	56.7%	Weak
Quality Improvement	07	03/07	42.9%	Weak
Infrastructure & Basic Equipment	21	24/42	57.1%	Weak
Emergency Equipment	34	40/68	58.8%	Weak
Emergency Medication	41	52/82	63.4%	Weak
Diagnostic services	23	26/46	56.5%	Weak
Ancillary Services	03	04/06	66.7%	Strong
Clinical Services	10	07/10	70.0%	Strong
Consulting services	07	10/14	71.4%	Strong
Interventions (Signal Functions)	67	94/134	70.6%	Strong
Total	251	280/447	62.6%	Weak

Notes: Categorization: Score - 33.3–66.6% = “Weak”, and Score - 66.7% - 100% = “Strong”.

Table 6 Showing Barriers to the Availability of Capacity and Resources at the ED MRRH

Barrier	Description	Frequency
Infrastructure	Inadequate or unavailable physical space/item	09/137 (06.6%)
No Equipment	Resource not available or outsourced from medical staff	40/137 (29.2%)
Broken Equipment	Item present, but broken and not repaired	13/137 (09.5%)
Stock Out	Resource, service or function inadequate due to failure in stock management, procurement or patient load	48/137 (35.0%)
Training	Knowledge and skills gap to use a resource or provide a service	06/137 (04.4%)
Personnel	Staffing gaps, limited the use of resource or service	06/137 (04.4%)
User Fees	Service available, but accessed only after out of pocket payment by the patients (Subsidized)	03/137 (02.2%)
Open Hours	Service or resource available for some not most hours of the day	01/137 (0.7%)
Other	Explanation given, but not fitting above categories	11/137 (08.0%)

Barriers to Emergency Preparedness (Capacity & Resources Availability – A&E MRRH)

Whenever the rating of the availability of the service or item assessed was inadequate (score <2), reasons to explain influences for the deficiency were explored. These reasons informed the barriers to emergency preparedness at the A&E MRRH. The most reported barriers at the A&E were stock out of key emergency drugs (35.0%), followed by absence of essential emergency equipment (29.2%), then broken and unrepaired emergency care equipment (9.5%). While the least reported barriers were; Training & personnel (4.4%) each, user fees (2.2%) and hours open (0.7%), (see Table 6).

Discussion

Concerning the MRRH A&E ward's emergency preparedness capacity: Since MRRH is the main tertiary referral hospital in SW Uganda, the study reported a high patient load at the A&E ward (55/day) with a relatively low number of medical staff (13 nurses) at the A&E (per shift, nurse/patient ratio of 1:6–9). Likewise, only about 67% of the staff at the A&E ward were trained in key emergency care skills. The implementation of the available hospital protocols was quite low at <57%, of note were missing triage protocols for children under five years and pregnant women; who they immediately would transfer to maternity or pediatric wards for assessment, causing unnecessary delays in patient care. Additionally, staff supervision was sporadically done (no documented record of external supervision of the A&E ward in the last six months).

LMIC hospitals grapple with high patient visitation loads and staffing challenges. A study in Bhutan reports that the country's main tertiary hospital ED records significant-to-high patient volumes with an overall ED staffing of just 17 doctors and 35 nurses (nurse/patient ratio of 1:4–6).¹⁹ Additionally, significant medical staff training deficits (eg. area of trauma care) were reported in Bhutan and southern Africa hospital EDs.^{6,19} A study in Ghana reported that hospital EDs lacked in use; clinical protocols, safety protocols, and an emergency response plan.⁶ An annual hospital performance report on MRRH (2022) attributed challenges such as the low medical staffing levels, poor training of emergency staff, under-utilization of protocols and irregular supervision in the hospital among others, to meager central government financing, failure of local hospital administration to make clinical protocols accessible for daily use, and administrative weakness in supervision.¹⁵

These hospital emergency preparedness capacity gaps have far-reaching effects on both the A&E medical staff and the patients they serve. For example, medical staff are exposed to high workloads and burnout, and an inadequacy to implement protocols due to poor training; whereas, the patients are risked to care in a deficient emergency care setting resulting into disastrous health outcomes like disability or even death.^{4,10,13}

With reference to the MRRH A&E ward's emergency preparedness resources: The A&E ward had much of the key infrastructure areas available (70.1%), a significant boost in emergency care provision; however, its emergency equipment and medications availability was relatively low, below 64% for both items. Among ward services, only 10% of the critically ill patients delivered to the unit in an ambulance had an emergency care trained staff on board, an observed critical EMS system failure. Diagnostic services, such as point of care tests (eg. RBS) and the imaging test like CT Scan, were very inadequate (30%). However, routine laboratory tests (HB estimation, CBC) and other imaging services (ultrasound, X-ray) were fairly available (>60%). By heavily relying on out-of-house diagnostics, a delay in patient

care is introduced at the A&E. The signal interventions, such as vital signs, airway, breathing, circulation and disability maneuvers, were routinely done (most scoring >72%), the obstetric interventions were limited by inadequate space, obstetric medication and equipment (50%).

The availability of A&E infrastructure is a good indicator into the quality of emergency services provided at any emergency care unit.²⁰ Nevertheless, critical deficiencies in the areas of ED emergency care equipment and medications were reported as well in a related LMIC study, stressing a poor foundation to quality emergency care services.⁴

Reporting about ED services, a study notes that only about 20% of emergency patients delivered by ambulance had a trained staff on board, furthermore, obstetric and neonatal patients arriving at the ED were instead sent to their respective wards due to the absence of appropriate medication and equipment at the EDs.⁶ Similarly, in Ghana, most diagnostic items, such as CT scan, ultrasound scan, stationary X-ray and common laboratory tests (like blood electrolytes), were available but not in adequate amounts to serve all the clients seeking them, reports one study.⁴ On the contrary, a related study in Eswatini (southern Africa) observed fairly good ability to provide signal functions/interventions, in three (3) hospital EDs, notably; however, these EDs lacked in performance of airway and circulation interventions.⁶

The observed failures and inadequacies in the emergency preparedness resources category may be linked to low financing of the EMS, letdowns in the procurement and supply chain of hospital resources, and a demand-driven shift in local policy.^{4,13,15} As a direct consequence, these EMS system failures unnecessarily delay emergency patient care and/or worsen the patients' already precarious medical situation.¹³

Overall, the modified WHO HEAT scored the level of emergency preparedness of the A&E ward at MRRH as "weak", with a summative score of 62.6%.¹⁸ This result was consistent with another study done in Ghana, where a university hospital ED's level of emergency preparedness was scored at 57.4%, falling under the "weak" category.⁴ This finding lends credence to the growing body of evidence that EDs in LMIC hospitals, particularly in sub-Saharan Africa, struggle with attaining adequate levels of emergency preparedness to successfully manage patients with emergency conditions.

The four most reported barriers to an adequate level of emergency preparedness at the ED MRRH were as follows: (1) stockouts, (2) no equipment, (3) broken equipment and (4) infrastructure. Stock outs were reported mostly in the assessment of emergency medications, whereas emergency equipment assessment revealed barriers such as no equipment or broken equipment yet to be repaired. Finally, infrastructure was the fourth leading barrier to the EDs emergency preparedness, reflected as a lack of, or presence of inadequate physical space or a physical item. Most, if not all, of the above barriers were a product largely of poor stock management, procurement failures and, to some extent, a high patient load. Studies have reported inadequate medication stock, low equipment availability, high volume of patients and a general lack of training in emergency care knowledge and skills as key factors in the poor emergency preparedness of many EDs in several African hospitals.^{4,6}

Limitations

The study was cross-sectional in nature, limiting the researchers to a snapshot of data. To mitigate this effect, the tool was split into three categories (Records, Nurse & Doctor categories) to ensure data triangulation and bias reduction. Due to reliance on self-reports, social desirability could have crept in; therefore, most quantifiable items were background checked through direct observation (eg. availability and quantity of medical items). Furthermore, it was a single-site study; however, the authors chose the biggest, most resourced hospital with the highest patient load in Southwestern Uganda to generate a fairly representative data set.

Recommendations

The researchers recommend a mixed-method study to elaborate more on the cited barriers to achieving a strong level of emergency preparedness. We also suggest a multisite study across all major regions in the country to generate an overall assessment of the A&E's level of emergency preparedness countrywide.

Conclusions

Therefore, the modified WHO HEAT not only identified areas of weakness at the A&E ward but also quantified this weakness, and presented known barriers to emergency preparedness. The study found the level of emergency preparedness of the A&E ward at MRRH to be weak, furthermore, the biggest contributors to the weak level of emergency preparedness was identified as the low level of human resources and weak quality improvement checks. Common barriers to a strong level of emergency preparedness were medication stock out, absence of and broken equipment, and inadequacy in infrastructure, respectively.

These gaps call for the local hospital administration (MRRH) and stakeholders in the Ministry of Health (MoH) Uganda, to improve medical staffing levels and the number of supervisory checks at the A&E ward of MRRH. Furthermore, the administration at the hospital and MoH should look into correcting bottlenecks of medication stock outs, inadequate equipment and infrastructural challenges at the A&E ward of MRRH and other tertiary hospitals in Uganda with similar characteristics to the study site.

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