



Table of Contents

1. Executive Summary	3
2. Arua Regional Referral Hospital	10
3. Fort Portal Regional Referral Hospital.....	11
4. Gulu Regional Referral Hospital	20
5. Hoima Regional Referral Hospital	22
6. Jinja Regional Referral Hospital.....	31
7. Kabale Regional Referral Hospital	39
8. Lira Regional Referral Hospital	48
9. Masaka Regional Referral Hospital	50
10. Mbale Regional Referral Hospital.....	58
11. Mbarara Regional Referral Hospital.....	66
12. Moroto Regional Referral Hospital	74
13. Mubende Regional Referral Hospital	80
14. Nagura Regional Referral Hospital	87
15. Soroti Regional Referral Hospital	96
16. Appendices: Signatures of Departments Inspected	102
17. Appendices: Site Assessment Tool	114



1. Executive Summary

The March 2019 survey of all 14 regional referral hospitals in Uganda conducted by representatives from MOH Uganda confirmed a clear need for intervention into the 6 core departments identified in the 2017 AMPC feasibility study report.

- Casualty (Accident & Emergency)
- X-Ray
- Operating Theatres
- ICU
- Labor and Delivery
- Neonatal ICU

All hospitals were assessed against the benchmark equipment list created by AMPC in 2017 in order to create a gap analysis and confirm where investment was required. In summary, it was found that there is very little equipment available and in use, that exceeds 2 years useful remaining life.

To ensure any new equipment provided under this project delivers its expected useful lifespan and lowest possible cost of ownership it is critical that a minimum 5-year fully inclusive maintenance contract is included with the purchase of the replacement equipment. In many cases, relatively new equipment was in a poor state primarily due to lack of maintenance contracts, lack of spare parts and consumables and importantly lack of user and biomedical engineer training.

There is a significant skills and staffing shortage in all hospitals resulting in underutilization of the limited available equipment despite significant overcrowding in various departments, most notably labor and delivery and neonatal ICU.

The success of this program will hinge on a robust training needs assessment and the implementation of a training plan to ensure all new equipment is fully utilized along with revised standard operating procedures to maintain best practice in the facilities.

The Biomedical workshops at the majority of the hospitals were extremely well kept and well equipped and are indeed a highlight of this survey as an area that already meets or exceeds standards. The only notable exclusion was at Mubende where there is no Biomedical or maintenance workshop at all and the team have virtually no tools or spares. The Biomedical teams at each facility should receive refresher training on how to use all the test equipment and carry out 1st line maintenance and repairs on all new equipment provided to ensure high levels of equipment uptime.

The overall infrastructure of the hospitals is very much split into 2 categories. The buildings that have recently been constructed by JICA are in very good condition and have been constructed to a high standard. The buildings not yet upgraded/rebuilt are in a very poor condition and in most cases it may be more economical to rebuild rather than attempt a refurbishment.

Electrical power quality throughout the hospitals was very poor, except Mbarara which had very new main switchgear and transformers. In order to effectively run new equipment and ensure a long lifespan and high reliability significant upgrades to the main hospital power supply will be required.



Background

In January 2017 AMPC published a report on the condition of the 14 Regional Referral Hospitals in Uganda which provided a holistic overview of the current condition of the equipment, facilities and staffing available which impacts the level of care provided to the outlying surrounding areas of Uganda that these hospitals support.

The AMPC report highlighted a critical need to improve the availability of equipment, infrastructure and suitably trained staff in 6 key departments within these hospitals:

1. Accident & Emergency
2. X-Ray Department
3. Operating Theatre Department
4. ICU/HDU
5. Labor and delivery rooms
6. Neonatal ICU

A standard, benchmark package of equipment required per department based on international best practice and norms was proposed by AMPC, which would ensure the proper functioning of each department.

By ensuring that these departments are suitably upgraded, equipped, maintained and training provided, the regional referral hospitals will be enabled to deliver suitable high quality clinical outcomes to the patients in the regions they serve thus reducing the need for unnecessary referrals to the national referral hospital in Kampala, which is currently significantly overcrowded.

An initial overall project budget and scope was proposed based on the AMPC report of 2017 which was subsequently agreed in principal by both the government of Uganda and the Dutch funding agency, RVO as a viable project for implementation.

As 2 years have passed since the initial AMPC report, a team of engineers from MoH conducted onsite surveys of each of the RRH's in March 2019 to update the findings within the AMPC Report and develop a solution package per hospital within the overall project budget available.



Methodology

Prior to the planned 14 hospital visits the team reviewed the report from AMPC extensively to obtain an insight into the expected condition of the hospitals and equipment, the possible shortfalls of the facilities, and the hindrances experienced in providing care to patients.

In preparation of the hospital assessments, the team developed tools to ensure consistent data gathering and benchmarking of each facility inline with the AMPC feasibility study already concluded.

The primary aim of the updated site assessments was to determine what had changed since the AMPC site assessments in 2017 through either new equipment or upgrades carried out under other healthcare improvement programs and more importantly what further deterioration had occurred to both infrastructure and equipment during the prior 2 years.

Data gathered through the assessment visits provided the following information:

- Information about the status of the major equipment located at the main departments in the 14 RRHs;
- Information about the infrastructure that support this equipment;
- Information about the available Human Resources in the 14 RRHs;
- Mapping of the main challenges that the 14 RRHs are facing.

An inventory was done of all major equipment that was present during the time of the visits at the following departments which were included in this assessment:

- Radiology
- Accident & Emergency
- Main Operating Theatres
 - o CSSD
 - o Recovery
- ICU
- Maternity
 - o Obstetric Operating Theatres / Delivery Rooms
 - o NICU
- Maintenance Workshops
- Infrastructure

The 14 regional hospitals visited are spread throughout Uganda and as such it was decided to split the survey into 2 teams, Northern Uganda and West/Southern Uganda and the following routes were followed to allow the surveys to be concluded over a 2 week period from 11th to 21st March 2019.



Team North

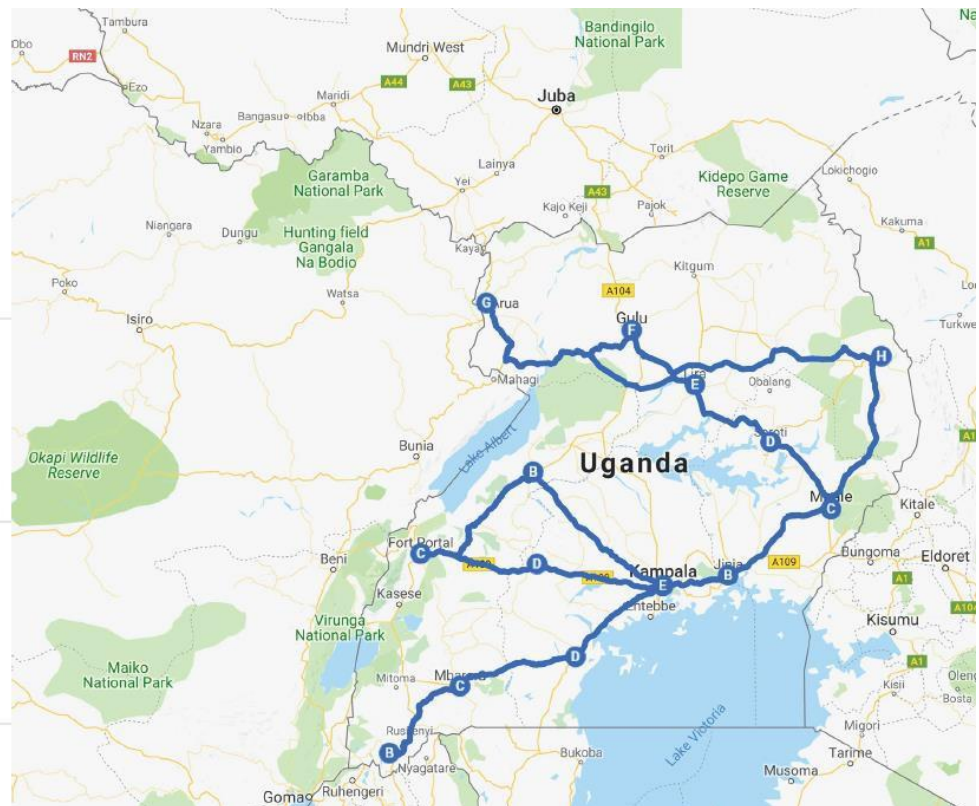
- A Kampala, Uganda
- B Jinja, Uganda
- C Mbale, Uganda
- D Soroti, Uganda
- E Lira, Uganda
- F Gulu, Uganda
- G Arua, Uganda
- H Moroto, Uganda
- I Kampala, Uganda

Team South West Trip 1

- A Kampala, Uganda
- B Hoima, Uganda
- C Fort Portal, Uganda
- D Mubende, Uganda
- E Kampala, Uganda

Team South West Trip 2

- A Kampala, Uganda
- B Kabale, Uganda
- C Mbarara, Uganda
- D Masaka, Uganda
- E Kampala, Uganda



Signatures were obtained from the various department heads at each hospital as well as from the hospital director who was debriefed after each visit was concluded as confirmation and support of the findings of the assessment.



Findings

1. Infrastructure

Over the last few years there has been significant investment by the Japanese funding agency, JICA into the upgrading of various buildings at the regional referral hospitals. Where there has been JICA investment the buildings and infrastructure (Power/Water/Medical gas) are in very good condition and of good quality.

However, the majority of buildings which have not been upgraded are in a very poor and dilapidated state and are in urgent need of upgrades. Considering the age of the buildings and layout it would be advisable to rather rebuild each wing/department as funds become available or as part of bigger projects such as this one.

A stable power supply is of critical importance at all hospitals. Almost all RRH's have a maximum available power supply of 200KVA with only Mabarara having 3, 500KVA transformers on site and a new main distribution panel. (Where JICA have built a new buildings/departments they have included a new transformer and distribution board for these buildings, but this does not extend to the rest of the hospital, nor does it have the capacity to be extended to other buildings on the site.)

For any equipment upgrades to be successful upgraded power supplies will be required at each hospital including main switch gear, voltage regulators and stabilizers. Without this upgrade, any new equipment would not be able to function effectively.

Most hospitals have new oxygen plants with filling stations, but there is no central oxygen pipework and distribution network so the hospitals are still reliant on filling and distribution of oxygen cylinders throughout the various departments. In some of the new JICA buildings where piped oxygen has been installed, the manifolds are not being used and cylinders are still being distributed in the various rooms despite a central piped oxygen system. Training and changes in operating procedures are required to ensure proper effective use of piped oxygen systems.

2. Equipment

In the X-ray department in the majority of hospitals, only a general x-ray machine and 1 or 2 ultrasound scanners were available and functioning. All facilities are still using analogue film processing and the few that did have a digital printer were struggling to obtain stock of film. In 2 hospitals even the drying cabinet was not functional so the films were hung up to dry outside.

Ultrasound scanners were varied in quality and age, but almost all had difficulties with probes and image quality with significant artifacts evident on many. Despite this, the volume of ultrasound scans undertaken is very high for such small units.

Across all departments there was a shortage of monitoring equipment particularly in casualty, operating theatres and ICU/HDU (if present).



There is an over-reliance on oxygen concentrators due to the lack of a central piped oxygen system especially in the NICU department across all facilities where up to 6 babies are connected to 1 concentrator with no means to regulate flow to each infant.

Where new equipment had been obtained over the last few years it was evident that there was a lack of user training or training for the biomedical engineers for basic maintenance which often resulted in the equipment either not being used at all or not being used correctly. Further it appeared that there were no maintenance contracts in place at all and consumables were not available. In almost all hospitals there was equipment in store rooms which was only missing a simple accessory or basic repair but due to improper handover of the equipment the local teams were not able to obtain the accessories or repair the equipment.

As mentioned in the infrastructure section, electrical power quality is significantly hindering the reliability and availability of much of the equipment especially in the CSSD departments which have been upgraded recently with new vacuum steam sterilizers but are unable to run due to lack of power.

A full assessment of functional equipment was carried out against the AMPC 2017 benchmark, and while as per the report there is some equipment available and functioning (Full report available in the below appendix) it is recommended to replace all equipment in each department when this program is executed. The equipment currently in use is unlikely to remain functional for more than 2-3 years even if maintenance plans are put in place due end of life or damage already done to components.

3. Workshops

Workshops generally were extremely well equipped, well setup and spacious with excellent housekeeping and implementation of the “5 S” program.

While there were sufficient tools and the facilities to enable the local biomedical teams to carry out repairs, in many hospitals there was a stockpile of equipment awaiting spare parts. There seemed to be a general challenge with budget allocation for ordering of parts and breakdowns.

Refresher training and regular product specific updates would benefit the local teams and greatly assist with ensuring equipment is repaired timeously.

4. Staffing

Most hospitals have no ICU or even HDU department available at all and even in the few that had ICU's, most are not in use due to a lack of trained ICU nurses and other support staff. All hospitals expressed the need for a fully functional ICU, but confirmed that they did not have sufficient suitably trained staff to run the units. In Mbarara there is a very well equipped, new ICU department which is empty due to a lack of ICU nurses.



In many neonatal ICU's there are on average 10 - 15 babies per nurse at any given time which significantly negatively impacts on the clinical outcomes and ability to deliver a full NICU service.

Surgeons were a contrast to this trend as there appeared to be sufficient surgeons available, however they were hindered by a lack of equipment with some hospitals even sending their surgeons to other hospitals as there were no longer the facilities available for them to continue performing procedures safely at the respective hospitals.

In all hospitals a full training needs assessment is required to ensure that there are sufficient, trained staff to fully utilize the equipment and upgrades provided under this program. As there will be a natural attrition of trained staff it is important to ensure a train the trainer program is put in place and regular refresher courses run throughout the project duration to ensure a sustainable and long lasting impact.



2. Arua Regional Referral Hospital

Introduction:

Located in the Northwest of Uganda Arua Regional Referral Hospital has approximately 372 beds and services 8 Districts, including the neighbouring countries of the Democratic Republic of Congo and South Sudan.



The Japanese International Development Cooperation Agency (JICA) is currently busy with a project at Arua Hospital, and it is required to only supply a CT scanner and the necessary infrastructure (i.e. generator) to support the scanner.



Infrastructure:

Arua Hospital does not have a dedicated electrical transformer feed and is connected to the town transformer. The hospital currently experiences regular power failures due to water levels in the hydropower system. A project is underway to connect Arua town to a new high voltage power line in order to eradicate (or at the very least limit) the regular power failures. The first phase of this infrastructure project is earmarked to be completed in October 2019.



3. Fort Portal Regional Referral Hospital

Introduction:

Originally built in 1920, Fort Portal gradually expanded until it was upgraded to a Regional Referral Hospital in 1994. Fort Portal is also recognized as a teaching hospital and attracts trainees from various medical education institutions. It is located in the Kabarole District and services 6 surrounding districts, including the Eastern Democratic of Congo. Fort Portal currently has over 500 beds and attends to over 1000 out patients and holds up to 350 inpatients daily.



Radiology:

The Radiology Department is located in a dilapidated, stand-alone structure and is in fairly close proximity to the theatre complex. The Radiology Building has an X-ray machine, which is still functional, but has no automatic film processing units or dryers available. Films are processed manually and hung to dry outside. Ultrasound services are provided from within this department. The building was found to have very limited space and would require expansion to accommodate new and additional equipment. There is adequate space adjacent to the building to accommodate the expansion of the building, however it is recommended that the entire structure be demolished and rebuilt.



Accident & Emergency:

The existing A&E unit comprises of 4 beds and a theatre. Due to the lack of staff, and the fact that this unit is only open between 9am and 5pm daily, the occupancies in this ward are very low. There are no afterhours A&E services provided by this department. The A&E is housed in the out-patient building, far from Radiology and the Theatre Complex. The necessary equipment within the A&E was found to be inadequate and/or not available.



Main Operating Theatres:

Two theatres are located in a stand-alone building in close proximity to A&E and Radiology. The structure of the building was found to be in a good condition, however the roof structure is dilapidated and the electrical services are not compliant nor safe.

Internally, the Theatre Complex was found to be well kept and functional for the procedures being undertaken, however the equipment being utilised has reached its end-of-life and/or is not functional. Recovery within the Theatre complex is non-functional as there is no equipment available for this function.



ICU:

There is no ICU in the General hospital, however there is an ICU located in the Private Wing. The ICU is not currently being used by the hospital due to lack of nursing staff. The ICU was found to be in a good condition with adequate equipment, however this equipment and ward is rarely used.



Maternity:

The Maternity Ward is located adjacent to the Radiology Department. Obstetric Theatres are available in the Maternity Ward, however due to the theatres being in use at the time of the inspection, access was not permitted to assess the condition of the theatres and equipment.

The building containing the Maternity Ward was found to be structurally sound, however the roof is dilapidated. Internally the condition of the ward was poor and in need of refurbishment.

Occupancies within the Maternity Ward are very high, with up to 10 Caesarian deliveries being performed per day, indicating an inadequate level of service at District Hospitals with a desperate need for this service by the surrounding population.



NICU:

As was observed in the Maternity Ward, the NICU also has a very high occupancy rate with the space being over utilized with end-of-life equipment. Up to 28 babies are born in this facility per day, and there were 21 babies in the nursery at the time of inspection. A localized piped oxygen supply to this room is desperately required as it was observed that up to 5 babies were connected to each oxygen concentrator thus not allowing staff to regulate/monitor the amount of oxygen delivered to each baby.



Maintenance Workshops:

A dedicated workshop is located to the rear of the hospital. The workshop was found to be spacious, very well organized and equipped to facilitate the repairs of the hospital and medical equipment.



Infrastructure:

Electrical supply to the hospital is a very high risk, at present the entire hospital is powered by a single overhead 100kVA transformer, which is inadequate for a facility of this size.

Numerous generators are located around the hospital and were found to be in varying conditions. It could not be assessed as to which generators powered which sections of the hospital nor which generators were operational at the time of the inspection.

Additional bulk electrical supply will be required to the hospital to accommodate any upgrades and new equipment.

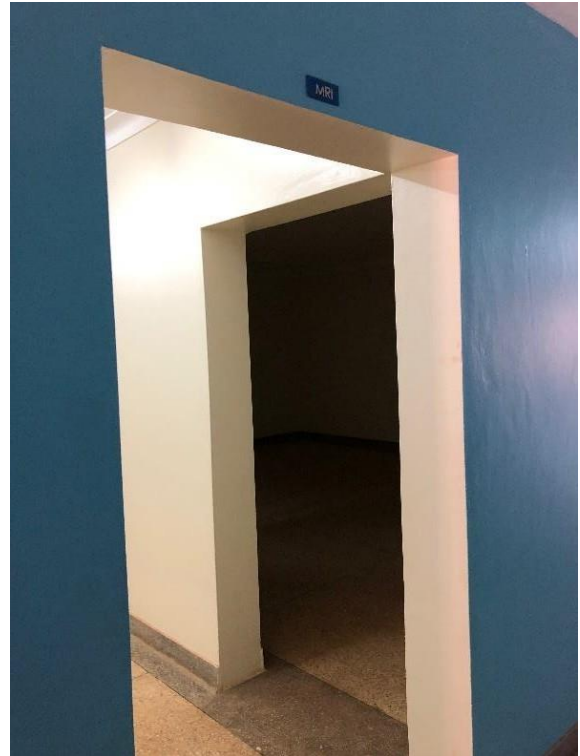


4. Gulu Regional Referral Hospital

Introduction:

Gulu Regional Referral Hospital is located in North Uganda, has approximately 400 beds and services 8 surrounding Districts. The Japanese International Development Cooperation Agency (JICA) is currently busy with a project at Guru Hospital, and it is required to only supply a CT scanner and the necessary infrastructure (i.e. generator) to support the scanner.

In 2015 the Italian Agency for Development Cooperation donated a new Radiology Department to Gulu Hospital. Infrastructure within this building is sufficient to install the CT scanner and MRI unit.



Infrastructure:

The hospital is currently powered by an overhead 315kVA transformer, which is an adequate supply of electricity for a hospital of this size, however additional build electrical supply will be required in order to accommodate additional upgrades and equipment. Generators were inaccessible at the time of the inspection, thus recording their condition and sizing was not possible.



5. Hoima Regional Referral Hospital

Introduction:

Located in the Hoima District and servicing 6 surrounding districts, including the Eastern Democratic of Congo, Hoima currently consists of 430 beds and attends to 700 to 800 patients daily.

Recently two double-storey buildings have been constructed through JICA. These buildings house the theatres, CSSD, ICU, A&E and Maternity, and contribute greatly to the need of the surrounding population. However, even with the JICA

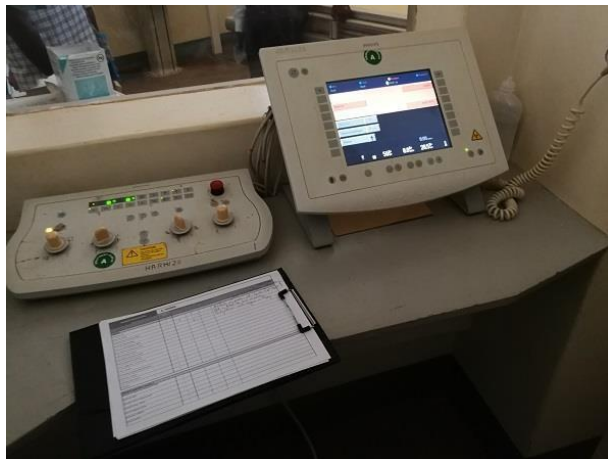
contribution the need for mother and child care/facilities is immediately evident as it was observed that the original (much older) Maternity, Obstetrics and Neonatal Intensive Care buildings were still in use. These facilities are severely dilapidated and are not fit for providing decent healthcare for the surrounding population.

Electrical Bulk Service supply to the hospital was identified as an immediate risk to the daily operations of the facility and the patients. Additional Bulk Electrical Service was installed at the hospital during the JICA projects, however this was done exclusively for the new JICA buildings and are insufficient for the day-to-day operations of the remaining buildings.



Radiology:

The Radiology Department is in a dilapidated, stand-alone structure behind the newly constructed Administration Building. It is in close proximity to the new JICA building housing the theatre complex, A&E and ICU. The Radiology Building has an X-ray machine, which is still functional, but has no automatic film processing units or dryers available. Films are processed manually and hung to dry outside. Ultrasound services are provided from within this department. The building was found to have very limited space and would require expansion to accommodate new and additional equipment. Ideally the existing Radiology building should be demolished and a new structure built, as there is adequate space adjacent to the building to do so.



Accident & Emergency:

The Accident & Emergency Department is located in the newly constructed JICA building, which also houses the theatres and an ICU. Occupancies within the A&E Department were high, indicating a great demand for this service within the surrounding area. The high occupancies could also be attributed to the fact that the hospital is unable to accommodate and treat these patients in other wards. Although the building is new, the design of this department has not made provision for a Procedure Room and patients requiring immediate care are seen to in the Triage/Ambulance drop-off area.

This department was found to be ill-equipped and understaffed for the number of patients being attended to.



Main Operating Theatres:

Three theatres are located on the ground floor of the newly built JICA building. The theatres were found to be in a good condition, however the equipment is reaching end-of-life and requires replacement. A CSSD is located directly adjacent to the theatre complex, however the autoclaves are not utilised due to insufficient electrical supply to the hospital.



ICU:

A 4 bed High Dependency Unit is located in the newly built JICA building. The unit was originally constructed as a Recovery Area to the Theatre Complex, however is currently used as an HDU. The unit was found to be in a good condition and fully occupied. There are, however, no qualified ICU nurses and very limited equipment, even for an HDU. Feedback from the unit manager confirmed the need for a dedicated ICU.



Maternity:

A delapidated Maternity Wing is located directly adjacent to the newly built JICA building. Although in a severe state of disrepair the Ward was fully occupied at the time of the inspection. The Maternity ward consists of an Obstetrics theatre, a Delivery Ward and two 16-bed Wards. All equipment within the Maternity Ward was found to be at end-of-life and/or beyond repair. The high occupancy rate indicates a potential lack of capacity/competence at surrounding District Hospitals.



NICU:

An NICU is located to the rear of the Maternity Ward and is also in a severely dilapidated state. The Ward was found to be over-occupied, with equipment either beyond repair and/or not available at all to facilitate the necessary care for babies.



Maintenance Workshops:

A dedicated workshop is located to the rear of the hospital. The workshop was found to be spacious and very well organized and equipped to facilitate the repairs of the hospital and medical equipment.

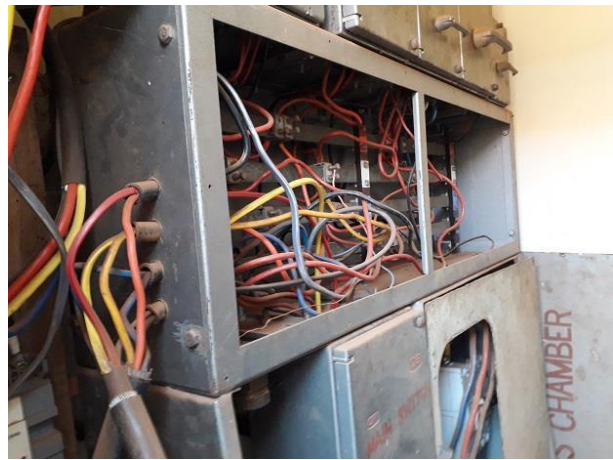


Infrastructure:

Insufficient electrical supply is an extremely high risk to Hoima Hospital and its patients that it serves. At present the entire “old” portion of the hospital is powered by a single overhead 100kVA transformer, which is inadequate for a facility of this size. An additional 200kVA transformer was installed by the JICA foundation, which provides dedicated power to the new JICA buildings, however this was also found to be inadequate as it was reported that the autoclaves in the CSSD tripped the mains power supply when they were used.



Numerous generators are located around the hospital that were found to be in varying conditions. It was not possible to record the size of all the generators installed nor which parts of the hospital they supplied backup power too. A new infectious disease center is currently being built at the rear of the hospital, which will add further strain to electrical demand of this facility. Addition bulk electrical supply will be required at Hoima in order to accommodate any additional and new equipment.



6. Jinja Regional Referral Hospital

Introduction:

Jinja Regional Referral Hospital is located in Southeastern Uganda and was founded in 1920. It serves a population of approximately five million people in Busoga and some parts of Buganda. The hospital has approximately 430 beds with an average occupancy rate of 76% and annual inpatient admissions of 25,456, whilst the annual out-patient department attendance stands at 156,205.

The greatest challenge for this hospital is the travel distance between departments.



Radiology:

The existing Radiology Department is housed in an old dilapidated building, which is in desperate need of an upgrade, or ideally, a total rebuild. The building houses an Ultrasound room and an X-ray room. A Fluoroscopy room is available however it was found to have no equipment. To allow for expansion for mammography and CT scan services it is recommended that the department be relocated to a new building in closer proximity to the Operating Theatres, ICU and Accident & Emergencies Department. A dedicated 30kVA generator is connected to this department, however it has not functioned since 2006.

The X-Ray machine/Bucky table is still functional and is an analogue unit. The unit is obsolete and software updates are no longer supported. Approximately 25 scans are conducted per day and film processing is done manually and hung to dry outside. Up to 30 ultrasound scans are conducted each day on a very old black and white ultrasound machine.



Accident & Emergency:

The A&E is located at the entrance to the hospital and also houses an OPD Department. Moving patients from the A&E to other hospital departments is done via the main entrance road for the hospital as there are no covered pathways. Space is limited within the A&E and it is too small to accommodate the amount of patients requiring care. This results in patients being put into beds located in back-of-house areas in this department. Equipment within this unit is very old with the majority of it being non-functional. Essential equipment for this department, i.e. defibrillators and ventilators, are not available.



Main Operating Theatres:

Jinja Hospital has a Main Theatre Complex, which houses 3 theatres, and an Orthopaedic Theatre Complex that houses 2 theatres.

The Main Theatre Complex received new equipment from GE Healthcare in 2009, which is still in working condition but is reaching end-of-life. All theatres are in need of refurbishment. Feedback from staff indicate that the lack of surgical instrument sets are a major concern for surgeons. The recovery area does not have any equipment, other than beds and need is in need of a refurbishment.

The Orthopaedic Theatre Complex infrastructure is in a fair condition, however there is a lack of equipment and surgical instrument sets within this unit. All equipment (that is available in this unit) was found to be old and broken and in need of replacement. The condition and age of the existing equipment impedes the procedures that surgeons are able to undertake.



ICU:

The ICU is a new building that was completed in 2011, through Assist International, and consists of a 6 Bed ICU and 7 Bed HDU.

The unit is fully equipped with GE Equipment, however the unit has not been occupied for the last 4 years as the hospital does not have any ICU trained doctors and staff. All equipment in this unit requires servicing, calibration and accessories.

The Oxygen manifold bank requires servicing as it was reported that there is a leak in the system.



Maternity:

The Maternity Unit consist of 4 wards and is fully occupied and very busy. The team were unable to inspect this unit due to patients being in labour. Feedback from staff indicated that that there is a shortage of equipment within this unit to deliver an adequate service to the patients.

Infrastructure to the Maternity Unit requires upgrading to ensure compliance.

There is no Obstetric Theatre within this ward as it is housed in the Main Theatre Complex.



NICU:

The NICU, NHCU and nursery are housed in a single department due to a lack of infrastructure. This unit is housed in a converted theatre and does not have adequate space for the number of babies being cared for.

The unit is overcrowded and space to move between babies is restricted, that resulting in inefficiencies in providing nursing care.

In addition to the above there is a shortage of equipment for the number of babies being cared for, and the equipment that is available has reached end-of-life and is in need of replacement.



Infrastructure:

Jinja Hospital is currently powered by a 300kVA electrical transformer, which is adequate for a hospital for this size, however additional capacity will be required in order to accommodate any additional radiology equipment.



7. Kabale Regional Referral Hospital

Introduction:

Kabale RRH, like many other hospitals in Uganda has benefited from JICA modernization projects in recent years and has a new building, which was opened in Jan 2015 and houses the new operating theatre complex, casualty department, neonatal ICU, maternity and delivery rooms.

Despite the recent investment in these departments, there is still a gap in key equipment to fully utilize these new buildings, which are of good quality and built to high standards.

The older buildings, which have not been upgraded are in desperate need of modernization, particularly the X-Ray department which is in a very dilapidated state.



Training and staffing are a critical problem at this hospital. Despite a well equipped 4 bed ICU/HCU housed in the new Operating department there were no patients utilizing this facility due to a shortage of trained ICU nurses.

Despite being geographically separated from other RRH's the hospital appeared to be underutilized in specialist departments such as Operating theaters, ICU, NICU and Casualty. This could be as a result of the shortage in skilled staff and equipment which causes patients to travel further to other hospitals to seek treatment.



Radiology:

The existing X-Ray department building is in extremely poor condition with several roof leaks, and the floor is breaking up.

There are 2 relatively new ultrasound scanners, however both lack probes to cater for all required cases and on average 720 scans are performed per months.

The flouroscopy unit is no longer fully functional so only conventional chest and general x-rays are currently undertaken. In the previous month 351 scans were conducted.

The department is still fully analogue, however there is a partially functioning Carestream X-Ray processing unit but manual wet processing is still the norm.

The building will require rebuilding and enlarging to accommodate the addition of a CT scanner and dedicated flouro and bucky room.



Accident & Emergency:

The Casualty department is housed inside the new JICA building and includes space for 5 casualty bays, a minor procedure room / operating theatre, duty room and equipment store.

Despite being, the only casualty department for quite a large geographic area and being almost brand new, and in extremely good condition the department was totally empty when we surveyed at 11am on a Monday.

Besides the beds and some basic equipment, the department does lack the majority of equipment that would normally be found in a casualty department. The minor operating room is essentially empty with no equipment at all.

There were virtually no staff for this department on duty, however this may be due to the fact that they lack key equipment to enable them to offer a casualty service and may have been redeployed elsewhere,



Main Operating Theatres:

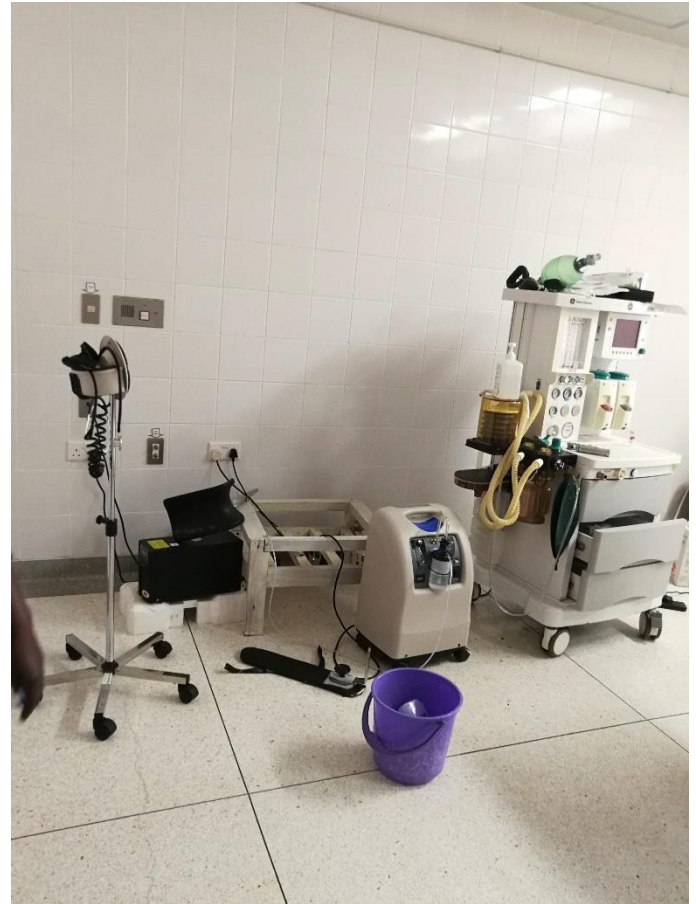
The main operating department only carries out procedures 4 days a week, Mon-Thurs and is in very good condition. It has been well equipped; however, some equipment is not complete such as the anesthetic machines, which have been supplied without monitors.

As with the casualty department the operating department seems to be underutilized.

There seems to be a general lack of user training on the new equipment provided.

While the facilities are of a high standard and there is some good equipment available, this department is failing to reach its full potential due to a lack of training, skills mix and gaps in key equipment.

For example despite Tuesdays and Thursdays being designated for orthopedic surgery, the brand new mobile C-Arm is unused making it very challenging for surgeons to verify the successful completion of procedures.



ICU:

A brand new 4 bed HCU is housed in the new theatre complex and was also empty at the time of the survey. The department head informed us that they have a lack of trained ICU nurses resulting in the unit rarely being used.

While much of the equipment is nearly new, the beds for example are not suitable for full ICU functionality and there are insufficient medical gas outlets.

The bed spacing also does not allow for space around the head of the bed for emergency resuscitation and a reconfigured layout would be advised if this unit is to be upgraded to a full ICU.



Maternity:

This was one of the quietest maternity departments out of all the hospitals surveyed and was in a good condition also housed in the new JICA building and situated directly above the operating department.

There are a lack of cots for the newborn babies and often adult beds are used for up to 4 or 5 babies in the absence of an alternative.

Despite Kabale being in the colder South Western region of Uganda there was no heatig available in the ward and even the infants are exposed to the low temperatures at night time and early mornig. Ward heating and ventialtion would be advised in this deparment.

The low number of births per month in this unit seems disproportionate to the polulation of the region and it seems expectant mothers are seeking care elsewhere.



NICU:

The current neonatal ICU appears to be inside a converted storeroom with no heating or ventilation and the room was found to be extremely cold at the time of the visit.

There are currently 3 incubators, 1 with phototherapy and a makeshift workstation for the duty nurse which is actually the top of an equipment trolley.

The unit was not in use with no babies at all at the time of the visit and appeared not to be used regularly at all.

From the birth register, statistically a dedicated neonatal ICU is definitely required, but as with many other departments at Kabale, there seems to be another underlying reason impacting the patient volumes and activity in all departments.



Maintenance Workshops:

The maintenance workshops is situated just outside the main hospital and acts as a regional workshop for the surrounding areas.

The workshop is spacious, well laid out, with good workbench space and a good range of hand tools and test equipment.

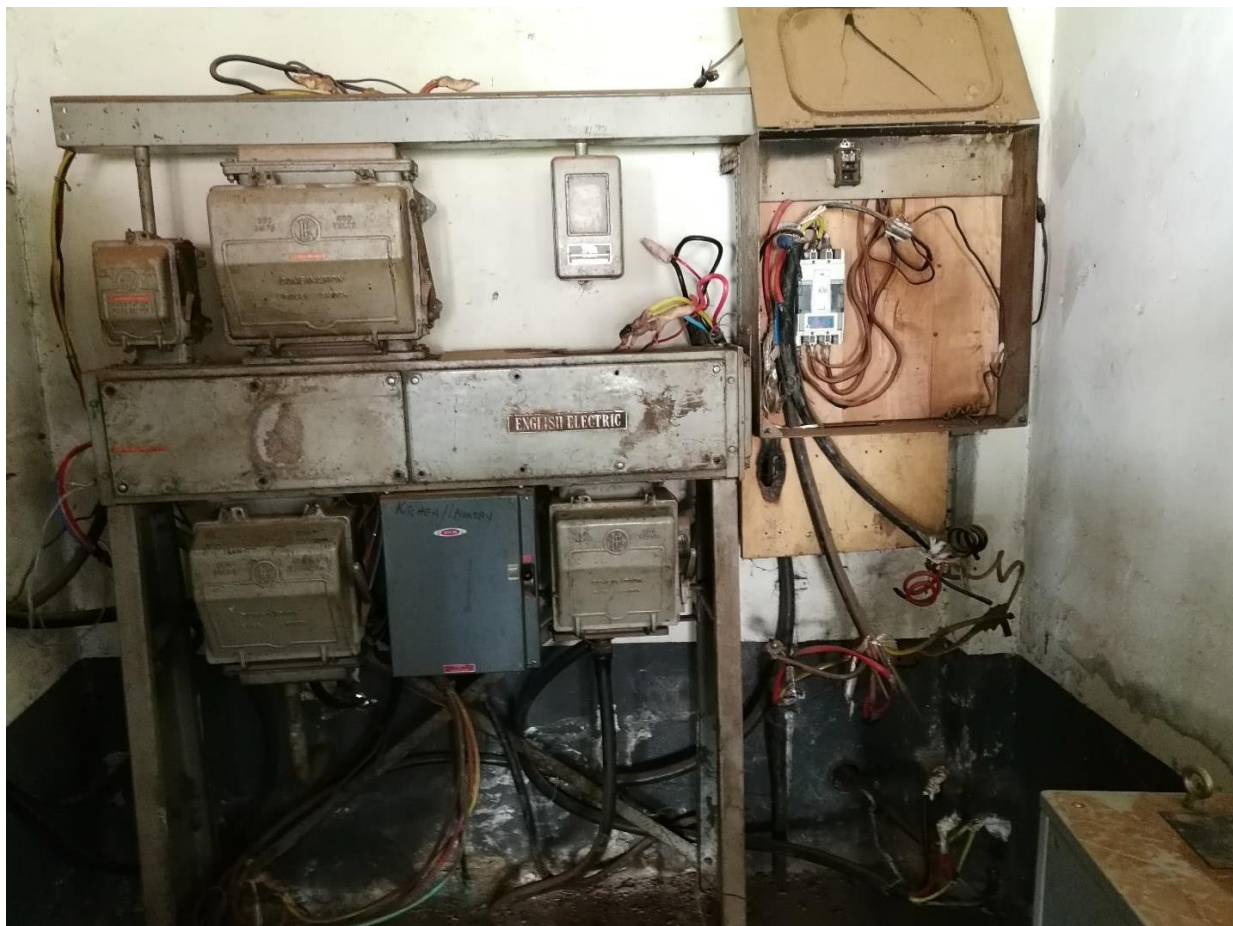
The local engineering team are well equipped to carry out 1st line repairs, however they struggle with obtaining spares when faults are identified resulting in a backlog of broken equipment awaiting spare parts.



Infrastructure:

The main hospital site is fed by 2 by 200KVA transformers so there should be sufficient incoming power to the site from the local municipality, however Kabala as a town suffers from frequent power trips and as such UPS and generator backup is critical to maintain effective running of life support systems.

The new JICA building has a dedicated power supply and switchgear which is in excellent condition, the rest of the hospital however is fed from old switchgear which is a poor condition and a full upgrade of the main switchgear and backup power generator system will be required to facilitate the running of the proposed new equipment.



8. Lira Regional Referral Hospital

Introduction:

Located in North Uganda, Lira Regional Referral Hospital was originally built in 1922, and has slowly grown until it was given Regional Referral Hospital status in 2003. The facility has approximately 400 beds and services 8 surrounding Districts, as well as overflow patients from Kiryandongo, Pader, Abim and Kabermaido. The Japanese International Development Cooperation Agency (JICA) is currently busy with a project at Lira Hospital, and it is required to only supply a CT scanner and the necessary infrastructure (i.e. generator) to support the scanner.



Infrastructure:

Electrical power supply to Lira Hospital is via a 200kVA overhead electrical transformer, which is insufficient for a facility of this size. Two generators (a 100kVA and 30kVA) are installed for backup power, however only the larger generator is utilized as the smaller generator is believed to use too much diesel. Additional electrical supply will need to be provided to this hospital in order accommodate any additional equipment.



9. Masaka Regional Referral Hospital

Introduction:

Masaka Hospital has benefitted from some recent upgrades and new buildings funded by JICA. While the infrastructure in these new buildings is of a good standard, there is still a critical shortage of medical equipment to allow effective use these new facilities. The A&E department for example is almost not in use due to lack of critical equipment.



Masaka runs an extremely busy NICU unit which routinely runs at about 190% capacity (32 babies in a 17 bed space) and even then by international norms and best practices the actual space allocated would not normally be used for more than 10 babies.

A new maternity and paediatric complex commenced construction in 2013, however due to cost overruns and funding issues this project has stalled and is currently not progressing with no clear timelines available as to when it could be completed.

According to hospital management, staffing levels are a significant challenge with the current staff compliment well below published national guidelines. There is also a critical skills shortage in specialist nurses across all departments and a clear need for significant investment into a training program is required.



Radiology:

The general X-Ray department is housed in a very old building, which is in desperate need of an upgrade, or ideally, a total rebuild.

Space is very limited in the current location to allow for expansion for mammography and CT scan services and it would be recommended to relocate the department to a new building more appropriately placed close to the Operating Theatres and A&E Department.

Up to 75 ultrasound scans are conducted each day on the 2 available ultrasound machines, however they lack probes and have problems with artifacts on the one machine.

The general X-Ray machine is still functional and is from a previous donor-funded ORET project however is now nearing end-of-life and is becoming less reliable due to frequent voltage fluctuations and instable power supply. Approximately 45 scans per day are conducted on this machine.



There is no automatic film processing unit or dryer and films have to be processed manually and hung to dry outside.

The hospital used to offer up to 25 fluoroscopy scans per day but the unit is no longer functional and requires replacement.



Accident & Emergency:

The casualty department is housed in the new JICA funded building adjacent to the new operating theaters and is one of few that has piped oxygen available.

The layout of the department is very good and includes a minor operating room.

The department however is lacking most equipment required to function as a specialist casualty at a regional level.

The operating room has no equipment besides a procedure table and as a result is hardly used except for very basic procedures.

The department was extremely quiet and had very few patients at the time of the visit. As with several other RRH's visited, a lack of skills and sufficient staff hinders the functioning of these facilities.

This once again highlights the need for a significant training and skills development program as part of this project to ensure any equipment and upgrades provided are fully utilized and are sustainable for many years to come.



Main Operating Theatres:

Considering how new the operating complex is, it was in a surprisingly poor condition and appears to have had very limited or no maintenance and general upkeep since it was opened.

As with all hospitals visited the cleaning regimes rely heavily on a bleach and water mixture which is poured across the floors regularly and pushed around and mopped up. The combination of a average high humidity climate of Uganda and frequent wetting with bleach and water has resulted in significant damage to joinery, finishes and especially medical equipment.

As can be seen in the below photo, all of the new equipment is already showing signs of significant rusting around the base where it comes into contact with water every time the department is cleaned.

Compared to other regional referral hospitals, the Masaka operating theatre complex was relatively quiet with few cases being carried out. The staff highlighted a shortage of orthopedic sets and equipment as a challenge and as with all hospitals, the halogen type operating lights do not last with the frequent power spikes and are often non functional.



Maternity:

The maternity department is housed in a very old building which is in a poor condition, lighting is a big problem especially in the delivery room where many babies are delivered at night.

The department only has 2 delivery beds which are extremely close to each other and almost no equipment to deal with complications during birth. There is 1 makeshift infant warmer as shown below right which hardly serves the required function.

The unit delivers on average 20 babies per day on the 2 delivery beds which results in the labor ward keeping mothers until very late in labor and then trying to move them to the delivery beds at the last possible minute or they end up delivering in the ward if a bed is not available.



NICU:

The neonatal ICU was extremely busy with 32 babies present at the time of the site assessment. As can be seen there are up to 4 babies per cot with any available surface being used to place babies.

Due to space constraints a double bunk type cot has been constructed to try make room for extra babies in the unit. This obviously is not clinically best practice, but is nevertheless a novel solution to the challenges they face.

The significant overcrowding results in a huge challenge for the few staff available to provide each baby with the required level of care. Equally the close proximity of the babies and lack of ventilation significantly increases the risk of an outbreak of communicable diseases in the unit.

The mortality rates sadly are high in the unit despite the best efforts of the team to cater for such a high number of babies.



Maintenance Workshops:

The maintenance workshop is located in a very old building with asbestos roofing which is in a poor condition and should be carefully renovated or rebuilt.

Compared to other hospitals this department was in a poor condition and did not appear to be well kept with little structure or order to how the workshop was laid out and kept.

The local engineering team had limited tools or spares available in the workshop and it did not appear as if many repairs were being undertaken in this building.

The hospital does however have a mobile maintenance truck which serves the wider area and appeared to be well equipped for general maintenance rather than biomedical engineering and repairs or fault finding/testing of medical equipment.



Infrastructure:

As can be seen by the below examples, the contrast between the old infrastructure and new JICA building power supply is significant.

That being said, the old switchgear is still in a good condition and appears well looked after.



The hospital does however have a shortage of available power on site to enable the upgrading and expansion of the x-ray department and addition of the new CT scanner.

A new transformer and main switchgear will be required to facilitate the planned upgrades.



10. Mbale Regional Referral Hospital

Introduction:

Mbale Regional Referral Hospital is located in Eastern Uganda. The hospital serves 14 Districts with a bed capacity of 460 and is responsible for a population of approximately 3.5 million people.

The Ministry of Health is currently busy with a project to build a new Surgical Complex to house A&E, Imaging, ICU and Theatres. The project is currently underway and is planned to be built in phases over the next few years.



Radiology:

In 2007 the Japanese International Development Cooperation Agency (JICA) undertook a complete upgrade to the Radiology Department. The department houses an Ultrasound room, X-ray room, and a Fluoroscopy room.

In order to accommodate the expansion for mammography, CT and MRI services it is recommended that this department be relocated to the new Surgical Complex building.

All the major equipment in this unit is functional but is nearing end-of-life. The only functional ultrasound unit is used to conduct approximately 60 - 80 scans per day. The general X-Ray machine/ Bucky table is an analogue unit and approximately 50 scans are conducted on this machine per day. This unit is obsolete and software updates are no longer supported.



Accident & Emergency:

The Accident and Emergency department is located in the same building as the OPD department, but is scheduled be relocated to the new Surgical Complex. Space within the Unit is limited and is overcrowded.

It was found that there is a critical shortage of equipment to deliver care to the patients. The equipment that is available is very old, with the majority of it being nonfunctional and in need of replacement.



Main Operating Theatres:

The Main Theatre complex was increased from 1 to 3 theatres through a JICA project. The majority of the equipment is in a fair working condition, but has reached end-of-life and is in need of replacement.

The recovery area does not have any equipment and is in need of a major refurbishment. The Theatre Complex is planned to relocate to the new Surgical Complex once completed.

At the time of the inspection the team were advised that the lack of surgical instrument sets were a major concern for the surgeons.



ICU:

There is currently no ICU facility at Mbale Hospital. In March 2019 the Royal College of Surgeons of England donated and revamped a portion of the existing surgical ward in 4 bed HDU. It is planned that the new Surgical Complex will house an ICU Department.



Maternity:

The Maternity Departments consists of two rooms with 3 delivery beds per room. The unit was found to be very busy and overcrowded, and is reported to be doing between 650 -750 deliveries per month. Entry into the units was not permitted due to patients being in labour at the time of inspection. All available equipment was found to be old and in need of replacement. Equipment within this unit is insufficient to provide care to the number of patients beings seen to and the infrastructure is in need of an upgrade.

The Obstetrics Theatre is located in the Delivery Unit and was upgrade by JICA. This theatre is currently doing between 200 –250 procedures and deliveries per month. The equipment was found to have reached end-of-life and is in need of replacement. Infrastructure to this theatre is also in need of an upgrade.



NICU:

The NICU, NHCU and nursery are all located one department due to a lack of space and infrastructure. The room currently being used for this unit is too small for the number of babies been cared for. The unit was found to be extremely busy and overcrowded. Space to move between babies is restricted thus resulting in inefficiencies in nursing care to patients. There is a shortage of equipment for the number of babies being treated and the equipment that is available has reached end-of-life and is in need of replacement.



Infrastructure:

Electrical power to this hospital is provided via a 500kVA and 315kVA transformer. There is only one 50kVA generator installed at this hospital, which is a high risk to patients in the event of a power failure.



11. Mbarara Regional Referral Hospital

Introduction:

Mbarara hospital is unique out of the 14 regional referral hospitals in that it is also supported by a full academic facility and effectively functions as a national referral hospital. The hospital is extremely busy but due to being classified as a regional referral hospital rather than a national hospital, it suffers from extreme staff shortages and budget constraints. The hospital relies heavily on the students to support and carry out procedures where there are insufficient permanent staff.

The hospital runs a busy operating theatre complex and all operating rooms were in use during the survey with even the recovery area being used as a spill over cesarean section delivery theatre when there is insufficient space in the 5 main operating rooms.

Despite having a fully equipped 8 bed isolation ICU department which was well stocked with consumables, the department was totally empty and locked up. The casualty department which is designed for 10 beds had almost 30 patients with many lying on the floor. Due to the lack of functioning ICU or HCU the casualty department serves as a HCU for the hospital with some patients staying in casualty for up to 4 months as they are not well enough to be moved to the general wards.



Radiology:

The radiology department is split over 2 floors in a relatively new building and is extremely busy.

They have a 16 slice CT scanner which was extremely busy and in use, however it was not able to give the clarity on the scans required for some of the neuro and cardiac work being undertaken. The injector is also faulty and needs replacement.

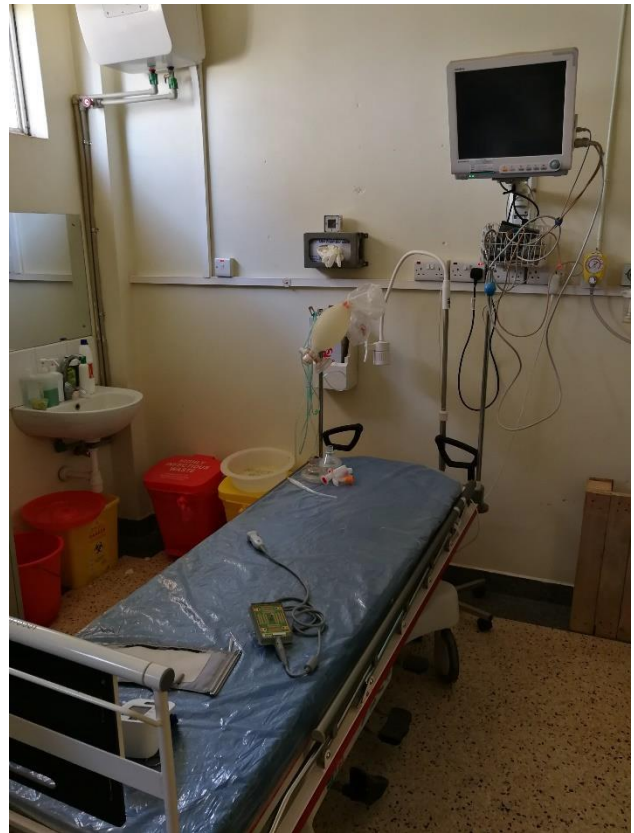
Mbarara is in desperate need for new ultrasound scanners with a long queue for scans and out of necessity a portable scanner has been placed on a broken cart based ultrasound as in interim solution to attempt to serve the waiting patients.

There is a partially functioning general X-ray unit which is 7 years old and a mobile X-ray.



Accident & Emergency:

Casualty is extremely busy and despite being designed for 10 beds had almost 30 patients at the time of the survey with many lying on the floor. The unit serves more as a HDU/ICU and casualty department with many long stay patients and struggles from flow as there is nowhere else in the hospital to move patients on to once stabilized due to the lack of high care facilities in the other departments/wards and the fact that the ICU is not in use.



The casualty also has a fully fitted out minor operating room, however this was not in use and appeared to be being used more as a study/rest area for the students. The department is critically short of staff and relies on the patients “helpers” to assist with some of the more basic tasks as there simply are not enough nurses to care for all the patients.



Main Operating Theatres:

The operating department was extremely busy and conducts a full range of surgical procedures covering all major disciplines. The recovery area has even been converted into a makeshift cesarean theatre and is used as an overflow when the 5 main theatres are full.

Anesthetic machines are problematic with many faults such as no automatic ventilation or no monitors. A big problem is the lack of routine maintenance and calibration on the machines. Significant variances were noted on a machine in use during a procedure.

The building condition is good, however there is a lack of ventilation and filtration where even neuro procedures are being undertaken with no laminar flow or clean air system in place which created an extreme risk of infection.



ICU:

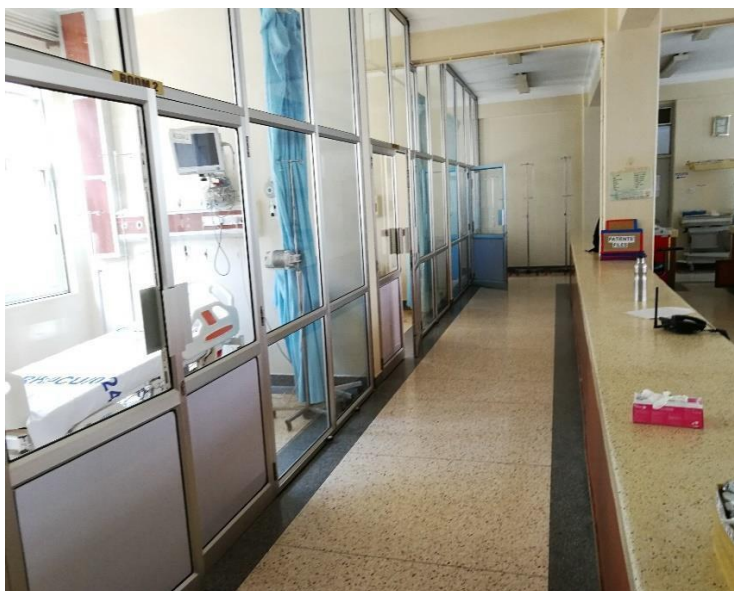
The hospital is one of few regional referral hospitals that has a fully equipped 8 bed ICU, however the unit was locked up and empty.

The ICU is well stocked even with consumables and there is a critical need for ICU beds or even high care beds as the casualty department currently holds all patients that are too ill to be transferred to the general wards.

It was unclear why the unit is not used at all despite the desperate need.

Despite having several ventilators and CPAP machines none were working according to the unit manager, but all looked relatively new and most likely only required minor repairs.

Apparently ordering of parts for some brands of equipment is problematic if not stocked or on catalogue with the central purchasing department.



Maternity:

The maternity department is in a very old building in poor condition and only has 2 delivery beds for up to 40 babies per day.

Mothers in labor are kept in the adjacent labor ward until the very last minute and often end up giving birth in the labor ward as there are not enough delivery beds.

The unit has virtually no functional equipment such as warmers or resuscitation tables and is not equipped to deal with any complications during birth.

The delivery room has virtually no lighting and no ventilation or heating and is not suitable for the number of babies being delivered every day. There is space outside to expand the unit and it would be recommended to rebuild a new bigger unit.



NICU:

The neonatal ICU is also in the same old building as the delivery rooms and general maternity wards and is in desperate need of an upgrade. The unit functions more as a high care unit due to a lack of equipment and staff to effectively run a dedicated neonatal ICU. The unit receives referrals from other hospitals and can hold anywhere from 30 to 70 babies at any one time. The space is critically small and careful consideration should be given to what the correct capacity should be and where to house the new/refurbished unit.



Maintenance Workshops:

The current maintenance workshop is located adjacent to the CT scanner and would be the ideal space to house the proposed MRI for this hospital so would need to be relocated elsewhere on the site.

There were limited tools and testing equipment available and only basic hand tools available.

Ordering of spare parts and consumables is problematic and hinders repairs to equipment on site.



Infrastructure:

The hospital has 3 by 500KVA main transformers on site and is expecting an upgraded dedicated main line to the site as part of other upgrades. 1 of the 500KVA transformers is not in use yet so there is sufficient capacity on site for upgrades and expansions, there is also a brand new main distribution board and switchgear in the basement of the X-Ray and operating theatre building with spare capacity for the addition of the MRI and upgraded CT scanner.



12. Moroto Regional Referral Hospital

Introduction: Moroto Regional Referral Hospital is located in Northeastern Uganda and is the referral hospital for the districts of Abim, Kaabong, Kotido, Moroto and Nakapiripirit and Napak. Moroto currently has approximately 172 beds. In 2015 a new OPD and A&E Wing were constructed under the first phase of the project through the Uganda Health System Strengthening Project (UHSSP), which is funded by the World Bank.



Radiology:

The Radiology Department is located in the new A&E Wing and houses an ultrasound room, X-ray/Fluoroscopy room, a Mammography room, a CT scanner room, and a MRI room. Only the Ultrasound and X-Ray/Fluoroscopy rooms were equipped with no equipment found in the remaining rooms. Equipment that was present was found to be in a good condition

Current infrastructure is sufficient to install Fluoroscopy, Mammography and a CT scanner. It is recommended that the existing MRI room be utilized to install a Fluoroscopy unit. The X-ray unit was found to be in good working condition is used to service approximately 15 patients per day. The ultrasound is a very basic model, only providing black and white images, and is used to conduct approximately 20 scans per day.



Accident & Emergency:

The A&E Department is a 5 bed unit and is part of a new wing that was built in 2015. The equipment that is available within this department is in a good condition, however the unit lacks some critical equipment.



Main Operating Theatre:

There is no Theatre Complex at Moroto Hospital and the theatre located within A&E Department is currently being used to perform all surgical procedures. Due to the lack of functional operating theatres, multiple procedures are being undertaken simultaneously. An average of 100 procedures are being undertaken in this theatre per month.

All the equipment within the theatre was found to be in a good condition and functional.

The designated Recovery Area was found to be in a good condition but is, however, missing critical equipment in order to provide the required level of care.



ICU:

At present there is no ICU nor HDU facility at the Moroto Hospital.

Maternity:

The delivery unit is currently in a temporary room in the new OPD wing. A new maternity building is under construction and is scheduled for completion by the end of 2020. All the equipment in this unit was found to be in a good functional condition. The Maternity Unit delivers on average 70 - 80 babies per month.



NICU:

The NICU, NHCU and nursery are all located in a temporary room in the new OPD Department. A new NICU is currently under construction and scheduled for completion by the end of 2020 as part of the new Maternity Wing. The majority of the equipment is in working condition and functional, however critical life support equipment (such as patient monitors and ventilators) is not available.



Infrastructure:

Power to the hospital is provided via a 630kVA overhead transformer, which is adequate for a hospital of this size and should be able to accommodate the additional load by the new construction project. In addition to this a 150kVA generator provides backup power to the hospital, however this generator will not be able to provide sufficient backup power to the new Building when completed.



13. Mubende Regional Referral Hospital

Introduction:

Mubende RRH has been partly rebuilt by a JICA funded project with the new buildings being in good condition while the remaining original buildings are in an extremely dilapidated state.

The hospital has an extremely busy A&E department, maternity and neonatal ICU. Unfortunately the antenatal consulting rooms and waiting area were not included in the recent upgrade by JICA and are totally unsuitable for the high volume of pregnant woman attending the hospital.

This is one of few RRH that does not have any maintenance workshop and associated tools and spares available resulting in even simple maintenance tasks going unattended for months at a time.

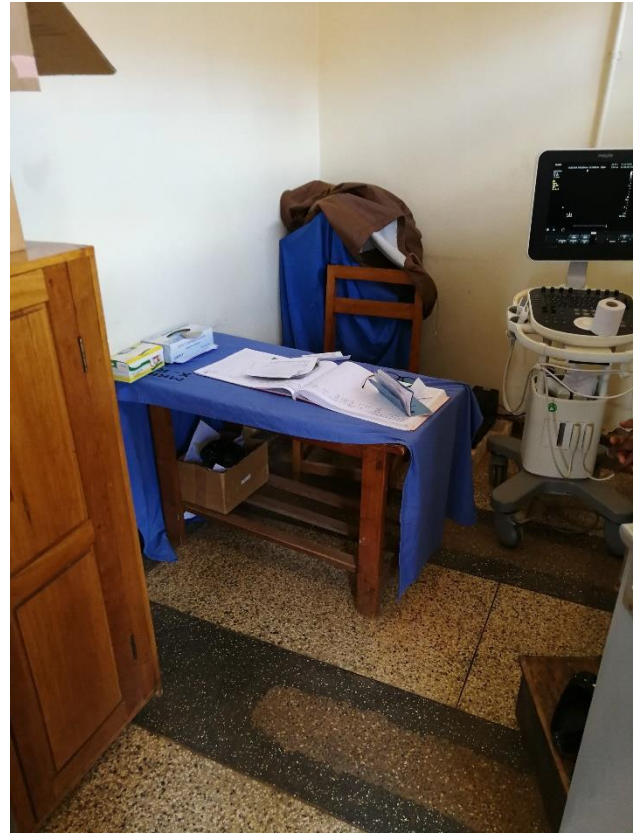
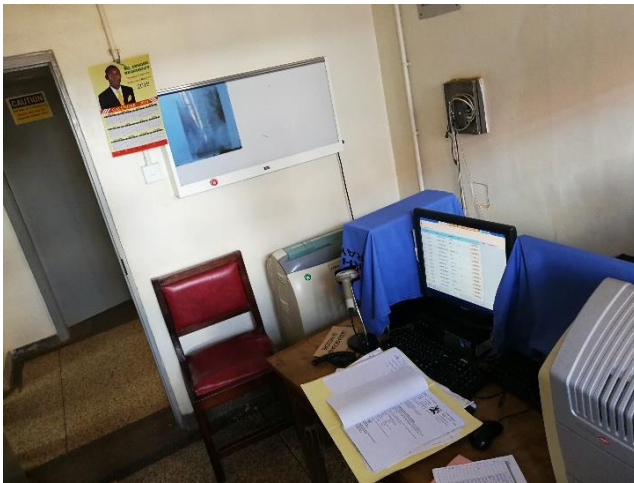


There is no dedicated ICU or HDU facility in the hospital and an area of the large casualty department in the new JICA building has been converted into a makeshift HCU but with no spacing between beds or equipment that is required to run a HDU or ICU effectively.



Radiology:

The radiology department is housed in one of the old buildings and has not been refurbished recently. There is only 1 working ultrasound machine but this requires additional/new probes. A fluoroscopy machine is partially functional and at end of life, there is a newer digital general diagnostic machine, which is functioning well, but the department has challenges obtaining films to print.

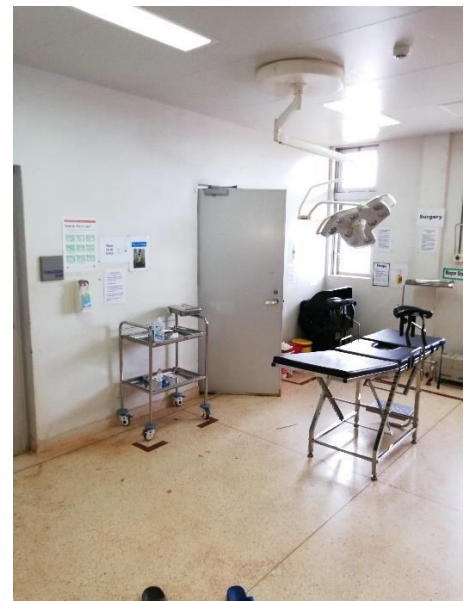


Accident & Emergency:

The casualty department is housed inside the new JICE building, however it is being used for at least double the number of patients for which it was designed. Extra beds have been squeezed into every available space and most were occupied at the time of the inspection. A make shift ICU/HDU unit has been setup in the corner of the unit, however there are no monitors or ventilators etc and the beds are pushed right against each other making it impossible for the nursing staff to effectively see to the patients. The unit appears to be being used more as a general outpatient type facility with some genuinely sick patients mixed in between.



Further analysis is definitely required to better understand the patient referral patterns and how better to direct them for treatment in the appropriate departments within the hospital.



Main Operating Theatres:

The operating department appears to be only being used for cesarean section births at the time of the site visit.

Although the infrastructure is relatively new and in a good condition, the department is only equipped with very basic equipment.

There is a new sterilizing area with new vacuum steam sterilizers, however they are unable to run due to power limitations and some basic maintenance.

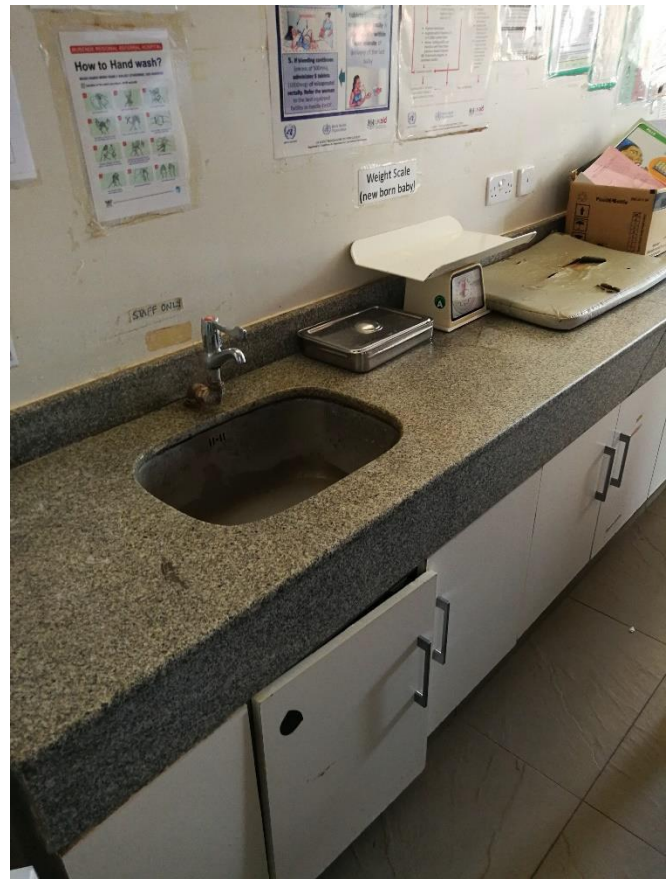
On the one sterilizer the lack of a simple consumable of high temperature grease for the door seal was preventing the machine from being used as the automatic door had jammed.



Maternity:

Although housed in the new JICA building, the maternity department did not receive all the required new equipment to fully operate the department.

The hospital receives a high number of expectant mothers and runs a very busy delivery ward, but as can be seen from the photo below, the condition of the birthing beds is critical and they are not safe to be used anymore.



NICU:

Although very crowded, the NICU unit is well staffed and fully occupied with infants.

The nurses in this unit are doing extremely well considering the lack of space and critical equipment, most notably a piped oxygen system would be of significant benefit to reduce the space needed for large oxygen cylinders in such a small already crowded unit.



Maintenance:

This hospital does not have a dedicated maintenance workshop and the local engineers only have a very small room which is mainly occupied by paperwork and the very few tools they have.

There is only 1 small toolbox of handheld tools which is mainly made up of tools purchased themselves privately.

The hospital has no spares or materials on site for even simple repairs to electrical wiring for example.

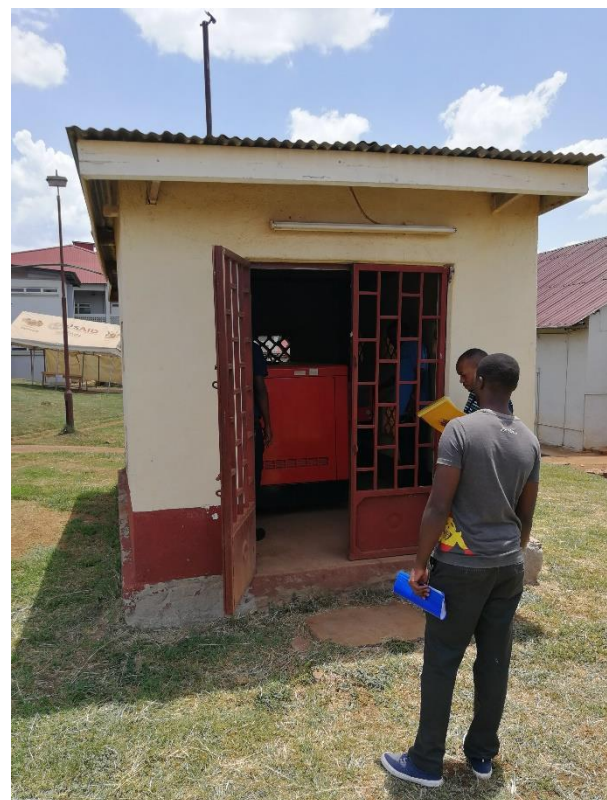
Priority should be given to improving the facilities for this department as even new areas of the hospital are falling into disrepair due to lack of maintenance.



Infrastructure:

The hospital is only served by 1 small 150kVA transformer and a 50kVa generator. There is a new 200kVA transformer and associated distribution board, but this is dedicated for the new JICA building and is already at capacity.

Additional main power capacity will be required to cater for additional equipment under this project.



14. Naguru Regional Referral Hospital

Introduction:

Naguru General Hospital is located in Central Kampala, thus servicing the main Kampala Metropolitan Area and Nakawa Division.

The Hospital is a new facility, with construction being completed in 2012. Due to its centralized location, Naguru General Hospital benefits from new infrastructure to support the facility and the building was found to be in a fair state of repair, however there is a critical shortage of operational medical equipment and staff to run the facility effectively and efficiently.



Radiology:

The Radiology department, located on the ground floor in close proximity to the A&E department and almost directly below the theatre Complex, was found to be in a good condition and housed a CT scanner and X-Ray machine. Both imaging devices are functional.

The Hospital also provides ultrasound services, although this not provided for from within the radiology department.



Accident & Emergency:

The A&E department is located on the ground floor, adjacent to the out-patient department, and can be accessed from within the hospital as well as from an ambulance entrance on the front side of the hospital.

The A&E department was designed to have a waiting area/reception, resuscitation room, recovery area, procedure room, orthopaedic room, recovery room and a consultation room, however the spaces are not being utilized as was originally designed, with the resuscitation room being used to provide triage/treatment services.

Equipment within the A&E Department was found to be at the end-of-life and in need of replacement



Main Operating Theatre:

Three theatres are located centrally on the first floor of the hospital. Theatre 1 is currently operational and equipment, provided by China, was found to be at end-of-life condition and in need of replacement. A Second theatre is currently not in use due to a lack of equipment and the Third is used for ARCHI Foundation procedures only. The Recovery area within the Theatre complex was found to be underequipped and there is no Pre-Operation space available.



ICU:

A small room dedicated to Intensive Care is located adjacent to the Maternity Ward and in close proximity to the Theatre Complex. The ICU currently accommodates 2 beds.

The room is cluttered with end-of-life equipment and grossly undersized with insufficient space to move around the patient beds in cases emergencies.

The ward can be expanded into an adjacent room containing 4 beds, or into an adjacent waiting area, however the ICU would need to be decanted to an alternative location and beds/space sacrificed in order to achieve this.



Maternity:

The Maternity Ward is located on the first floor, adjacent to the ICU. The Maternity is extremely busy with 100% occupancy and numerous patients being assisted on the floors in the passages.

The condition of the ward was found to be in a poor condition, most likely due to the high occupancy rate of this ward. Equipment being utilised to facilitate birthing is at end-of-life and is in need of replacement.



NICU:

As was observed in the Maternity Ward, the NICU also has a very high occupancy rate with the space being over utilized with end-of-life equipment that is in need of replacement.



Maintenance Workshops:

At present there is no dedicated workshop at the Naguru Hospital and this service is currently being rendered from within the existing (unused) CSSD department, located adjacent to the Radiology Department. The workshop was found to be underequipped and in an inadequate space to conduct general maintenance services to the hospital services and equipment.



Infrastructure:

Being centrally located in the capital city of Kampala, Naguru General Hospital has sufficient bulk electrical services supply for a healthcare facility of this size.

As Naguru is still a new facility the internal infrastructure was found to be in a good and compliant condition. A 350kVA generator is installed on the West end of the hospital grounds and was found to be in a good condition. It is, however, recommended that additional backup generator capacity be installed to accommodate any new equipment that will be provided to the hospital.



15. Soroti Regional Referral Hospital

Introduction:

Soroti Hospital is located in Eastern Uganda and is the referral hospital for 8 surrounding Districts. The hospital currently has approximately 250 beds

The hospital was built in the 1940's for a population of approximately 300,000 and is currently responsible for a population of approximately three million people.

Due to the age of the hospital, and the lack of regular preventative maintenance, the buildings were found to be dilapidated and in urgent refurbishment. The hospital also requires additional beds/facilities in order to accommodate the needs of the growing surround Districts.



Radiology:

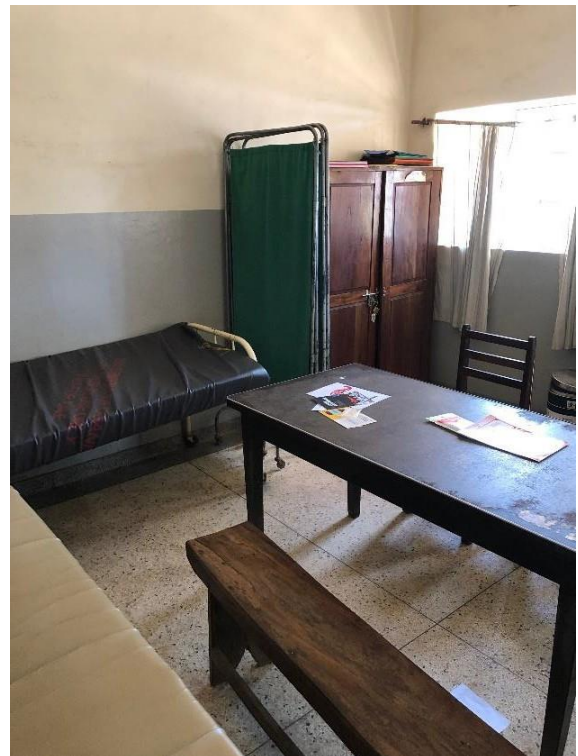
The Radiology Department comprises of an X-Ray room and two Ultrasound Rooms. Space within the existing building is limited and will not allow for expansion to accommodate Mammography and a CT scanner. It is therefore recommended that a new Radiology Department be built to facilitate the provision of these services.

The Radiology Department currently houses a Bucky X-Ray System and a mobile X-ray, however this equipment is nearing end-of-life and is in need replacement. The general X-Ray machine is an analogue unit, which is obsolete and software updates are no longer supported for this unit. Approximately 20 scans per day are conducted on this machine and film processing is done manually and hung to dry outside. An Ultrasound unit is available, but is however faulty, thus providing an intermittent service to patients. 50 to 60 Ultrasound scans are conducted daily when the unit is operational.



Accident & Emergency:

The A&E Department shares space within a building that is occupied by the OPD Department. Space in this department is limited and the layout of the A&E does not facilitate efficient and effective workflow for nursing and care to patients. The equipment within the A&E was found to be very old, with the majority not functioning, and in urgent need of replacement.



Main Operating Theatre:

The Main Theatre complex houses two theatres, with only one being used due to a lack of equipment. This subsequently results in multiple surgical procedures being undertaken within the same theatre simultaneously. Approximately 350 - 450 surgical procedures are undertaken per month.

All the equipment is at end-of-life and in desperate need of replacement. The building was also found to be in a severely dilapidated state and in urgent need of refurbishment.



The Recovery Area was found to not have any equipment and can therefore not provide adequate recovery care to surgical patients.

Feedback by Theatre Staff highlighted a lack of surgical instrument sets that were a major concern for the surgeons.

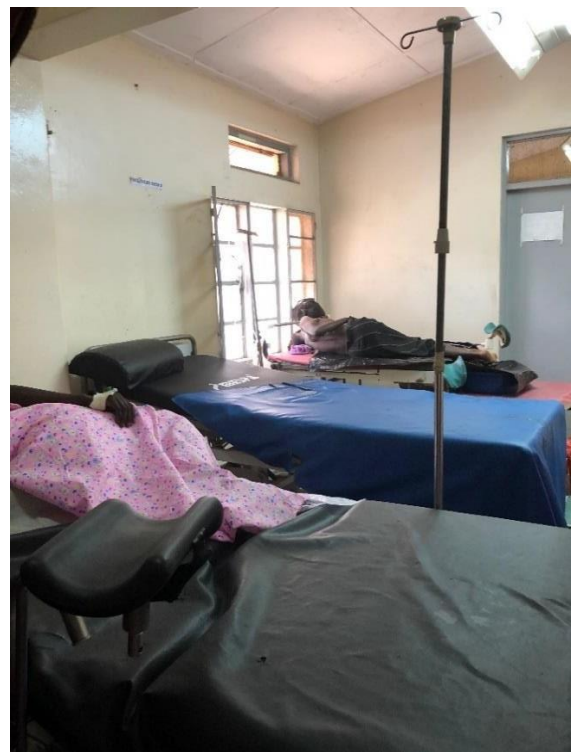
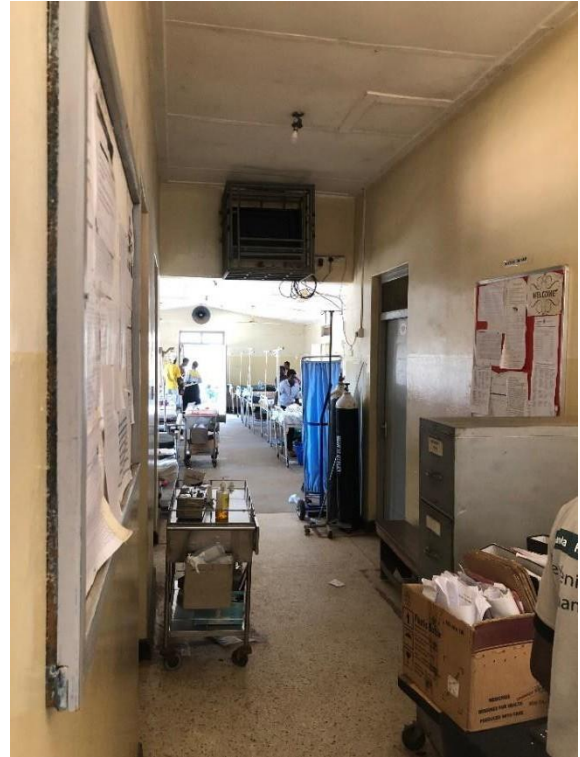


ICU:

Soroti Hospital currently has ICU or HDU facility and is unable to provide this level of care.

Maternity:

The Maternity Unit houses a delivery room with 3 delivery beds, in which approximately 20 deliveries are done per day. The Obstetrics Theatre is not a part of this unit and is located in the Main Theatre complex. The Unit was found to be very busy and fully occupied at the time of inspection.



NICU:

The NICU, NHCU and nursery are all consolidated in one department due to insufficient space and infrastructure. Space is very limited within the room and it can only accommodate 4 babies.

The available equipment is end-of-life and in urgent need of replacement. At the time of inspection there were no babies being cared for.



Infrastructure:

Electricity to Soroti Hospital is via 315kVA transformer. Access to the generator was not possible at the time of inspection.



16. Appendices: Signatures of Departments Inspected

Hospital	Proof of Inspection
Arua Regional Referral Hospital	Inspection conducted on a weekend, thus no signatures obtained
Fort Portal Regional Referral Hospital	Page 103
Gulu Regional Referral Hospital	Inspection conducted on a weekend, thus no signatures obtained
Hoima Regional Referral Hospital	Page 104
Jinja Regional Referral Hospital	Page 105
Kabale Regional Referral Hospital	Page 106
Lira Regional Referral Hospital	Inspection conducted on a weekend, thus no signatures obtained
Masaka Regional Referral Hospital	Page 107
Mbale Regional Referral Hospital	Page 108
Mbarara Regional Referral Hospital	Page 109
Moroto Regional Referral Hospital	Page 110
Mubende Regional Referral Hospital	Page 111
Nagura Regional Referral Hospital	Page 112
Soroti Regional Referral Hospital	Page 113



Hospital name and info	8. At a glance Fort Portal
Department: Medicine	
Head of Department's Name: <u>MAJI JOHN</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772-656700</u>	Email: <u>malijohn20@gmail.com</u>
Department: Obstetric/Gynaecology	
Head of Department's Name: <u>Katehangwa Deborah</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772406707</u>	Email: <u>Katehangwada@yahoo.com</u>
Department: General Therapy	
Head of Department's Name: <u>11</u>	Signature: <u>11</u>
Tel Contact: <u>11</u>	Email: <u>11</u>
Department: Accident and Emergency	
Head of Department's Name: <u>Nakalemwa Isid</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772562708</u>	Email: <u>nakalemwa.isid@gmail</u>
Department: ICU/ICU	
Head of Department's Name: <u>No ICU</u>	Signature: _____
Tel Contact: _____	Email: _____
Department: HDU	
Head of Department's Name: <u>NYAMARI AGNES</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0773544347</u>	Email: <u>nyamari.agnes@gmail.com</u>
Department: Maternity	
Head of Department's Name: <u>KIRUNGI CHRISTINE</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772535881</u>	Email: _____
Hospital Director	
Hospital Director's Name: <u>LOUIS N. Muhindo</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0773277355</u>	Email: <u>louim3@gmail.com</u>
Hospital Stamp	
For: DIRECTOR FORT PORTAL REGIONAL REFUGEE HOSPITAL 15 MAR 2019 P.O. BOX 10, FORT PORTAL Date: _____	



Hospital name and info		4. Hoima	
Department Inpatient			
Head of Department's Name:	Kibuka Ambrose	Signature:	<i>Kibuka</i>
Tel Contact:	0752-092206	Email:	Kibuka88@gmail.com
Department Outpatient			
Head of Department's Name:	Mandera Irene	Signature:	<i>Mandera</i>
Tel Contact:	0772391683	Email:	Mandera.dominica@gmail.com
Department General Practice			
Head of Department's Name:	Dr Bitamazine Denis	Signature:	<i>Bitamazine</i>
Tel Contact:	0772690021	Email:	bitamazine.d@yahoo.com
Department Accident and Emergency			
Head of Department's Name:	Awachango Paska	Signature:	<i>Awachango</i>
Tel Contact:	0782654912	Email:	paskabruna@gmail.com
Department ICU/OTU			
Head of Department's Name:	Dr Bitamazine Denis	Signature:	<i>Bitamazine</i>
Tel Contact:	0772690021	Email:	bitamazine.d@yahoo.com
Department ICU			
Head of Department's Name:	0782500902	Signature:	<i>None</i>
Tel Contact:	Nabukalu Gave	Email:	Jannerabukalu2017@gmail.com
Department Pharmacy			
Head of Department's Name:		Signature:	
Tel Contact:		Email:	
Hospital Director			
Hospital Director's Name:	Dr. Peter Mukobi	Signature:	<i>Peter Mukobi</i>
Tel Contact:	0774408225	Email:	mukpet@gmail.com
Hospital Stamp:			
MINISTRY OF HEALTH HOIMA REG. REF. HOSPITAL 14 MAR 2019 P.O. BOX 5, HOIMA			
Date: _____			



Hospital name and info		5. Jinja	
Department: Inpatient			
Head of Department's Name:	URASSA JONATHAN	Signature:	<i>[Signature]</i>
Tel Contact:	0772848777	Email:	jonathanurassa207@gmail.com
Department: Obstetric Theaters			
Head of Department's Name:		Signature:	
Tel Contact:		Email:	
Department: General Theaters			
Head of Department's Name:	Aggrey Lubirike	Signature:	<i>[Signature]</i>
Tel Contact:	077254003	Email:	aggreylub@gmail.com
Department: Accident and Emergency			
Head of Department's Name:	N/O Aggrey Mpaata Harriet	Signature:	<i>[Signature]</i>
Tel Contact:	0772544293	Email:	
Department: ICU/HDU			
Head of Department's Name:	Dr Aggrey Lubirike	Signature:	<i>[Signature]</i>
Tel Contact:	0772544003	Email:	aggreylub@gmail.com
Department: ICU			
Head of Department's Name:	Dr Anyama M.	Signature:	<i>[Signature]</i>
Tel Contact:	0752658113	Email:	mangupeni@yahoo.com
Department: Radiology			
Head of Department's Name:	Dr. Nyolia James	Signature:	<i>[Signature]</i>
Tel Contact:	0751808556	Email:	nyoliajamesdr@gmail.com
Hospital Director			
Hospital Director's Name:		Signature:	
Tel Contact:		Email:	
Physician Status			
DR. ANYAMA PHILIP		Date: _____	
Deputy HD		+256772 401 067	
		anyamaphilip@yahoo.com	
FOR HOSPITAL DIRECTOR ★ 14 MAR 2019 ★ JINJA REGIONAL REFERRAL HOSPITAL P. O. BOX 43, JINJA			



Hospital name and info	6. Kabale
------------------------	-----------

Department: Anaesthesia

Head of Department's Name: *SEGANE Ashirae Signature: [Signature]
 Tel Contact: +256 700232830 Email: ashirae.segane@gmail.com

Department: Obstetric Theatres

Head of Department's Name: In Main OT Signature: _____
 Tel Contact: _____ Email: _____

Department: General Theatres

Head of Department's Name: BHARUCARA ALISON Signature: Bharucara Alison
 Tel Contact: 0782 601414 Email: bharucaraalison@gmail.com

Department: Accident and Emergency

Head of Department's Name: *KIRIMPA ENOS Signature: Enos
 Tel Contact: 0782308605 Email: Enos@gmail.com

Department: ICU/CCU

Head of Department's Name: No ICU Signature: _____
 Tel Contact: _____ Email: _____

Department: OPD

Head of Department's Name: ASINGWIRE JOVITA Signature: Asingwire Jovita
 Tel Contact: 0776367534 Email: asingwirejovita46@gmail.com

Department: Maternity

Head of Department's Name: As above Signature: _____
 Tel Contact: _____ Email: _____

Hospital Director

Hospital Director's Name: Dr Namasopo Sophie Signature: [Signature]
 Tel Contact: +256 772470297 Email: snamasopo@gmail.com

Hospital Status:

Date: _____



MINISTRY OF HEALTH
 REPUBLIC OF UGANDA



Hospital name and info	2. First Postal Masaka
Department: Internal	
Head of Department's Name: <u>KAMWESIGYE BRENDA</u>	Signature: <u>Bamwesigye</u>
Tel Contact: <u>0781474777</u>	Email: <u>bkamwe@gmail.com</u>
Department: Obstetric / Gynaecology	
Head of Department's Name: <u>Mugisha Prossy</u>	Signature: <u>UPR</u>
Tel Contact: <u>0755311504</u>	Email: _____
Department: General Practitioner	
Head of Department's Name: <u>In main OT</u>	Signature: _____
Tel Contact: _____	Email: _____
Department: Accident and Emergency	
Head of Department's Name: <u>NAKIBULLE FAUSTA</u>	Signature: <u>Nakibulle Fausta</u>
Tel Contact: <u>0782355400</u>	Email: <u>Nakibulle Fausta@gmail.com</u>
Department: ICU/OTU	
Head of Department's Name: <u>None</u>	Signature: _____
Tel Contact: _____	Email: _____
Department: NICU	
Head of Department's Name: <u>Bingi Gladys</u>	Signature: <u>Bingi Gladys</u>
Tel Contact: <u>0774620182 / 0751963467</u>	Email: <u>bingigladys@gmail.com</u>
Department: Maternity	
Head of Department's Name: <u>Caroline Namukama</u>	Signature: <u>C Namukama</u>
Tel Contact: <u>0776261653</u>	Email: <u>Namukama Caroline 17@gmail.com</u>
Hospital Director	
Hospital Director's Name: <u>Kabuye Edward</u>	Signature: <u>Kabuye Edward</u>
Tel Contact: <u>0772435129</u>	Email: <u>edwardkabuye@yahoo.com</u>
Principal's Name	
	
Date: _____	



Hospital name and ID	9. Mbale
Department/Manager	
Head of Department's Name: <u>ANGUYO NELSON</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772451457</u>	Email: <u>anguyonelson3@gmail.com</u>
Department Obstetric Theatres	
Head of Department's Name: <u>KIPWOLA JENNIFER</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782413956</u>	Email: <u>Kipwola@yahoo.com</u>
Department General Theatres	
Head of Department's Name: <u>AKOL BETTY</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782155761</u>	Email: <u>bettyakol4@gmail.com</u>
Department Accident and Emergencies	
Head of Department's Name: <u>Idarok Agnes</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0783030622</u>	Email: <u>-</u>
Department ICU/ITU	
Head of Department's Name: <u>Mugala Christine Janet</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0774376097</u>	Email: <u>cmugala78@gmail.com</u>
Department NICU	
Head of Department's Name: <u>Euchi Florence</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782679070</u>	Email: <u>florance2024@gmail.com</u>
Department Maternity	
Head of Department's Name: <u>Takali Sylvia</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0712547083</u>	Email: <u>takalisylvia@gmail.com</u>
General Director	
Hospital Director's Name: <u>DR. TUGAINYO EMMANUEL</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0773515601</u>	Email: <u>tituura@gmail.com</u>
Principal Hospital Administrator	
<u>KIVEJINJA SALIM</u> <u>Smkivejinja@gmail.com</u> <u>0772454663</u>	
 HOSPITAL DIRECTOR 15 MAR 2019 MBALE REG. REFERRAL HOSPITAL P.O. BOX 921, MBALE Principal Hospital Administrator ★ 14 MAR 2019 ★ Mbale Reg. Referral Hospital	



Hospital name and info	14. Mbarara
Department: Inpatient	
Head of Department's Name: <u>Dr. KAGABA-PATRICK</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772682869</u>	Email: <u>Kagababrick@yahoo.com</u>
Department: Outpatient Clinics	
Head of Department's Name: <u>RIAKATO RUSE</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772691827</u>	Email: <u>riakato73@gmail.com</u>
Department: General Theatres	
Head of Department's Name: <u>In main OT</u>	Signature: _____
Tel Contact: _____	Email: _____
Department: Accident and Emergency	
Head of Department's Name: <u>Dr. BAGANZA</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>+256752487909</u>	Email: <u>baganza.kenneth@gmail.com</u>
Department: ICU/ITU	
Head of Department's Name: <u>Muhindo Esau Bahamba</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0784836334</u>	Email: <u>Muhindo.esau75@gmail.com</u>
Department: NICU	
Head of Department's Name: <u>DR. KYOYAGABA STELLA</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0774130637</u>	Email: <u>kstellak20002000@yahoo.com</u>
Department: Maternity	
Head of Department's Name: <u>DR. KAYONDO Mues</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782407453</u> <u>C.H.O.D</u>	Email: <u>mkayondo@must.ac.ug</u>
Hospital Director	
Hospital Director's Name: <u>Dr. GRIKOT FRANCIS</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772 41 58 75</u> <u>Dr. Bange C, MD</u>	Email: <u>bangeec@gmail.com</u>
Regional Stamp	
MBARARA REGIONAL REFERRAL HOSPITAL 19 MAR 2019 P.O. Box 40, Mbarara - Uganda	
Date: <u>19.03.2019</u>	



Hospital name and info	10. Moroto
Department Inmate	
Head of Department's Name: <u>KATAMBA RODGERS.</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0784757404</u>	Email: <u>Katambarodgers26@gmail.com</u>
Department Outpatient	
Head of Department's Name: <u>ACHAYO SANTINA FRANCA</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772923809</u>	Email: <u>achayo.santinafranca@gmail.com</u>
Department General Therapy	
Head of Department's Name: _____	Signature: _____
Tel Contact: _____	Email: _____
Department Accident and Emergency	
Head of Department's Name: <u>ACAN RUBBOS</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782928729</u>	Email: <u>acanrubbos@gmail.com</u>
Department ICU/HDU	
Head of Department's Name: _____	Signature: _____
Tel Contact: _____	Email: _____
Department MBU	
Head of Department's Name: <u>SINDAUMA GRACE REBECCA</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782418174</u>	Email: <u>gracerebecca86@gmail.com</u>
Department Maternity	
Head of Department's Name: <u>Dr Ogwang Alfred. F</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772454995</u>	Email: <u>ogwangaf@gmail.com</u>
Hospital Director	
Hospital Director's Name: <u>Dr Ogwang Alfred. F</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0772454995</u>	Email: <u>ogwangaf@gmail.com</u>
Hospital Stamp	
For. HOSPITAL DIRECTOR 18 MAR 2019 ★ Date: _____ MOROTO REGIONAL REFERRAL HOSPITAL	



Hospital name and info	11. Mubende
Department: Inpatient	
Head of Department's Name: <u>*KABAISSA YUVENSIO</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0722972568</u>	Email: <u>Kabyuv11@gmail.com</u>
Department: Outpatient/Daycare	
Head of Department's Name: <u>None.</u>	Signature: _____
Tel Contact: _____	Email: _____
Department: General/Therapy	
Head of Department's Name: <u>Gr Awako - Laurer</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0989158883</u>	Email: <u>Lauraawako5@gmail.com</u>
Department: Accident and Emergency	
Head of Department's Name: <u>*Biira Iderechi Katwesigye</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782121680</u>	Email: <u>iderechi.biira@gmail.com</u>
Department: ICU/ICU	
Head of Department's Name: <u>None.</u>	Signature: _____
Tel Contact: _____	Email: _____
Department: NICU	
Head of Department's Name: <u>MUHINDO SEMERITAH</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0752392843</u>	Email: <u>Semeritah.muhindo@gmail.com</u>
Department: Maternity	
Head of Department's Name: <u>Atikoru Victoria Dema</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0752993792</u>	Email: <u>Victoriayukoru@gmail.com</u>
Hospital Director	
Hospital Director's Name: <u>Apungo Jane Edith</u>	Signature: <u>[Signature]</u>
Tel Contact: <u>0782337782</u>	Email: <u>janeapungo40@gmail.com</u>
Hospital Stamp:	
 MUBENDE REGIONAL REFERRAL HOSPITAL 15 MAR 2019 P.O. BOX 4, MUBENDE FOR: HOSPITAL DIRECTOR	



Hospital name and area

13. Naguru

Department Location

Head of Department's Name:

KIRYAKO Albert

Signature:

[Signature]

Tel Contact:

0702-278911

Email:

akiryako@gmail.com

Department Obstetric/ Gynaecology

Head of Department's Name:

Byomuhangi Albino

Signature:

[Signature]

Tel Contact:

0776500549

Email:

byomuhangi.albino@gmail.com

Department General Medicine

Head of Department's Name:

copy to albino

Signature:

[Signature]

Tel Contact:

Email:

Department Accident and Emergency

Head of Department's Name:

KASOZI EROME

Signature:

[Signature]

Tel Contact:

0702517498

Email:

erome@gmail.com

Department Laboratory

Head of Department's Name:

Kabwendero Cathy (incharge) Cathy

Signature:

[Signature]

Tel Contact:

0702671846

Email:

ckabwendero@gmail.com

Department ICU

Head of Department's Name:

Muwanguzi Sarah

Signature:

[Signature]

Tel Contact:

0775-702538

Email:

Muwanguzi568@gmail.com

Department Pharmacy

Head of Department's Name:

Muwanguzi Sarah

Signature:

[Signature]

Tel Contact:

0775-702538

Email:

Muwanguzi568@gmail.com

Hospital Director

Hospital Director's Name:

Signature:

Tel Contact:

Email:

Hospital Name:

Date:



MINISTRY OF HEALTH
REPUBLIC OF UGANDA



Hospital name and info		12. Soroti	
Department Legal			
Head of Department's Name:	OCHOLA SOLOMON	Signature:	<i>[Signature]</i> (DARKROOM ART 10yrs experience)
Tel Contact:	0781180111	Email:	ocholasolomon2019@gmail.com
* Department Obstetric Theatres (not available)			
Head of Department's Name:		Signature:	
Tel Contact:		Email:	
* Department General Theatres			
Head of Department's Name:	Dr EKUNAT OUMU JOSTA	Signature:	<i>[Signature]</i>
Tel Contact:	0782469452	Email:	ekunatoj@gmail.com
Department Accident and Emergency			
Head of Department's Name:	KAFUKO MONICA	Signature:	<i>[Signature]</i> N/O/ces
Tel Contact:	0774327396	Email:	kcfuko-monica@yahoo.com
* Department ICU/ITU (not available)			
Head of Department's Name:		Signature:	
Tel Contact:		Email:	
Department ICU/ITU			
Head of Department's Name:	ATIKURU JACQUELINE	Signature:	<i>[Signature]</i>
Tel Contact:	0782867609	Email:	atikuru.j@gmail
Department Maternity			
Head of Department's Name:	Dr EKUNAT OUMU JOSTA	Signature:	<i>[Signature]</i>
Tel Contact:	0782469452	Email:	ekunatoj@gmail.com
Hospital Director			
Hospital Director's Name:	Dr. Mwangi Michael	Signature:	<i>[Signature]</i>
Tel Contact:	0772335366	Email:	mwangamike@yahoo.com
Hospital Admin			
			Date: 15/3/2018
AMONGI ROSE EKWANG - SNO -- 077447093 (General theatre) <i>[Signature]</i>			



17. Appendices: Site Assessment Tool

Hospital	Assessment Tool
Arua Regional Referral Hospital	JICA project
Fort Portal Regional Referral Hospital	Page 115
Gulu Regional Referral Hospital	JICA project
Hoima Regional Referral Hospital	Page 120
Jinja Regional Referral Hospital	Page 125
Kabale Regional Referral Hospital	Page 130
Lira Regional Referral Hospital	JICA project
Masaka Regional Referral Hospital	Page 135
Mbale Regional Referral Hospital	Page 140
Mbarara Regional Referral Hospital	Page 145
Moroto Regional Referral Hospital	Page 150
Mubende Regional Referral Hospital	Page 155
Nagura Regional Referral Hospital	Page 160
Soroti Regional Referral Hospital	Page 165



Hospital name and info	FORT PORTAL			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	2	1	18 scan done daily, one U/S unit faulty, the functional one is very old
X-Ray unit, mobile	1	1	1	
X-Ray machine, Bucky table, digital	1	1		Works on 600 clients monthly, has poor collimation positioning errors with the horizontal Bucky table, too old
X-Ray unit, fixed, analogue		0		
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		
Fluoroscopy system, digital	1	0		
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		1	1	Department uses manual film processing with films dried from outside
CR unit, single slot, + PC & monitor		1		
Printer, DICOM	1	1	1	Digital films not available, Printer not compatible with general set
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	0		
Generator	1	1		On central hospital generator

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	YES			± 10 patients per day
Operation table	1	2		
Operation lamp, ceiling mounted	2	0		
Operation lamp, mobile	1	2		
Electro surgical machine	1	0	1	
Anesthesia machine	1	1		
Patient monitor	1	1		
CTG Machine	1	0		
Cot, baby	1	1		
Radiant heater	1	1		
Scale baby	1	0		
Defibrillator	1	0		
Suction pump	1	2		
Oxygen concentrator	1	2		
OT infrastructure	1	poor		No AC, has no door, ceiling needs upgrade



Obstetric operation theatre 2 (Minor OT in A & E)				
Obstetric OT separate from General OT (Y/N)				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	0		
Operation lamp, mobile	1	1		
Electro surgical machine	1	0		
Anesthesia machine	1	0		
Patient monitor	1	0		
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	0		
Scale baby	1	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
OT infrastructure	1	1		

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	YES			
Recovery bed	2	0		
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1	0		
Defibrillator	1	0		

Operation theatre 1 (General, Orthopedic)				
Operation table	1	2		
Operation lamp, ceiling mounted	2	1	1	Lacks bulbs, needs LED bulbs for replacement
Operation lamp, mobile	1	1		
Electro surgical machine	1	1	1	No accessories
Anesthesia machine	1	2		Very old to sustain mechanical ventilation for the next 5 years.
Patient monitor	1	2		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	2	2	Collecting bottles are challenging, needs upgrade to a central vacuum system
Oxygen concentrator	1	1		Needs upgrade to piped oxygen
C-arm	0	1		
Orthopedic extension set				
OT infrastructure	1	good		



Operation theatre 2				
Operation table	1	2		
Operation lamp, ceiling mounted	2	1	1	No bulbs, needs LED bulbs
Operation lamp, mobile	1	1		
Electro surgical machine	1	2		
Anesthesia machine	1	1	1	No Patient monitors
Patient monitor	1	0		
Operating microscope	0	0		
Defibrillator	1	1		
Suction pump	1	0		
Oxygen concentrator	1	1		Pipped Oxygen
C-arm	0	1		Not often used
Orthopedic extension set		1	1	Very old, some equipment lacking.
OT infrastructure	1	poor		New ceiling, New lights, AC required

Operation theatre 3				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

General patient recovery				
(2)				
Recovery bed	2	2		
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1	0		
Defibrillator	1	0		



A&E				
Beds	10	4	2	
Examination bed	2	0		
Treatment lamp, mobile	1	0		
Treatment table	1	0		
Oxygen concentrator	2	1		Kept under lock and key Pipped Oxygen needed
Autoclave	1	1		
Suction pump	2	1	2	
Humidifier	1	1	1	Lacks flow meters/regulators
Patient monitor	2	0		
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0	1		
A&E Infrastructure	1	Poor		Very small, lacks emergency equipment.

ICU / HDU				
Patient bed	6			
Patient monitor	6			
Central Monitoring post	1			
Lamp, mobile	3			
Patient ventilator	3			
Suction pump	3			
Infusion pump	6			
Oxygen concentrator	3			
Defibrillator	1			
Bloodgas analyzer	1			
Haemaglobine meter	1			
Electrolyte analyzer	1			
Lab Refrigerator	1			
Lab Freezer	1			
Centrifuge	1			
ICU Infrastructure	1			

NICU				
(8)				
Cot, baby	4	12		Admits about 30 babies daily
Radiant heater	2	5		
Phototherapy lamp	2	2		
Open incubator with heater	0	1		No fuse
Open incubator with heater and phototherapy	1	0		
Incubator, baby	4	6	1	
Pulsoxymeter	0	2	2	
Patient monitor	8	1	1	No probes
Central Monitoring post	0	0		



Ventilator, baby	4	0		
Suction pump	2	1		
Oxygen concentrator	2	2		Pipped Oxygen needed. Medical gas analyzers required
Scale baby	1	1		
Nicu infrastructure	1	poor		Limited space, No ventilation, No AC.

Nursery room				
(5)				
Cot, baby	5			
Radiant heater	2			
Phototherapy lamp	1			
Open incubator with heater	0			
Open incubator with heater and phototherapy	0			
Incubator, baby	0			
Pulsoxymeter	5			
Patient monitor	0			
Ventilator, baby	0			
Suction pump	1			
Oxygen concentrator	2			
Scale baby	1			
Nursery infrastructure	-			

Delivery room				
Delivery bed	5	4		Required capacity is 10 beds, over 675 SVDs monthly is the load, very small space for the demand.
Baby scale	2	1		
CTG	2	0		
Suction pump	2	0		
Examination lamp	2	0		
Pulseoxymeter	2	0		
Resuscitation table	1	0		
Oxygen concentrator	2	1		
Autoclave	1	1		



Hospital name and info	HOIMA			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	1	1	Small Parts/Obs/Gynea Procedures. Artifacts on probes old. 3 probes
X-Ray unit, mobile	1	1		Old - Need to look at access
X-Ray machine, Bucky table, digital	1	1	1	Faulty/Partial needs reprogram on floppy
X-Ray unit, fixed, analogue		0		
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		Possible use dark room
Fluoroscopy system, digital	1	0		
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		1	1	
CR unit, single slot, + PC & monitor		1	1	
Printer, DICOM	1	1	1	
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	0		
Generator	1		1	55 kVA no fuel + faulty battery

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	YES			
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	0		
Operation lamp, mobile	1	2	2	
Electro surgical machine	1	0		
Anesthesia machine	1	1	1	
Patient monitor	1	0	0	
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	0		
Scale baby	1	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
OT infrastructure	1	poor		No AC, ceiling needs upgrade



Obstetric operation theatre 2				
Obstetric OT separate from General OT (Y/N)	YES			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	YES			
Recovery bed	2		0	
Patient monitor	2		0	
Lamp, mobile	1		0	
Oxygen concentrator	1		0	
Defibrillator	1		0	

Operation theatre 1				
Operation table	1	2	1	1 Broken
Operation lamp, ceiling mounted	2	2		
Operation lamp, mobile	1	0	1	
Electro surgical machine	1	0		
Anesthesia machine	1	1	1	
Patient monitor	1	2	2	SpO2 Probe
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	good		



Operation theatre 2 (General)				
Operation table	1	2		
Operation lamp, ceiling mounted	2	0		
Operation lamp, mobile	1	2	1	No bulbs, needs LED bulbs
Electro surgical machine	1	1		
Anesthesia machine	1	2		
Patient monitor	1	0		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	1	1	Shared in OT1
Oxygen concentrator	1	1		Have Pipped Oxygen in place need bottle plant
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	good		

Operation theatre 3				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

General patient recovery				
(2)				
Recovery bed	2	0		
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1			
Defibrillator	1	0		



A&E				
Beds	10	8		
Examination bed	2	2	2	
Treatment lamp, mobile	1	0		
Treatment table	1	0		
Oxygen concentrator	2	0		Use cylinders as backups, need pipped oxygen.
Autoclave	1	0		
Suction pump	2	0	2	
Humidifier	1	1	1	Lacks flow meters/regulators
Patient monitor	2	1	1	Faulty BP Probe
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0			
A&E Infrastructure	1	Good		

ICU / HDU				
Patient bed	6	4		Used as patient recovery, need for transfer trolleys and wheel chairs, to effectively use the available patient beds
Patient monitor	6	1	1	Cited need for ECG machines, tracheostomy sets
Central Monitoring post	1	1		
Lamp, mobile	3	0		
Patient ventilator	3	1	1	
Suction pump	3	1		
Infusion pump	6	2		
Oxygen concentrator	3	0		Have piped oxygen
Defibrillator	1	1		
Bloodgas analyzer	1	0		
Haemaglobine meter	1	0		
Electrolyte analyzer	1	0		
Lab Refrigerator	1	0		
Lab Freezer	1	0		
Centrifuge	1	0		
ICU Infrastructure	1	good		

NICU				
(8)				
Cot, baby	4	3		Admits about 8 babies daily
Radiant heater	2	2	1	
Phototherapy lamp	2	2		
Open incubator with heater	0	0		No fuse
Open incubator with heater and phototherapy	1	0		
Incubator, baby	4	3	3	Need servicing
Pulsoxymeter	0	1	1	



Patient monitor	8	0		
Central Monitoring post	0	0		
Ventilator, baby	4	0		
Suction pump	2	0		
Oxygen concentrator	2	0		
Scale baby	1	0		
Nicu infrastructure	1	poor		

Nursery room				
(5)				
Cot, baby	5			
Radiant heater	2			
Phototherapy lamp	1			
Open incubator with heater	0			
Open incubator with heater and phototherapy	0			
Incubator, baby	0			
Pulsoxymeter	5			
Patient monitor	0			
Ventilator, baby	0			
Suction pump	1			
Oxygen concentrator	2			
Scale baby	1			
Nursery infrastructure	-			

Delivery room				
Delivery bed	5	8		Required capacity is 10 beds, 13 – 20 SVDs daily is the load, very small space for the demand.
Baby scale	2	1		
CTG	2	0		Point of care portable U/S required, more fetal and maternal monitoring units needed
Suction pump	2	1		Suction ports required and a central vacuum system
Examination lamp	2	0		
Pulseoxymeter	2	0		
Resuscitation table	1	0		
Oxygen concentrator	2	0		Use cylinders
Autoclave	1	1	1	



Hospital name and info	JINJA			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	1		Working but old model
X-Ray unit, mobile	1	1		
X-Ray machine, Bucky table, digital	1	0		
X-Ray unit, fixed, analogue		1		
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		
Fluoroscopy system, digital	1	0		
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		0		
CR unit, single slot, + PC & monitor		0		
Printer, DICOM	1	0		
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	0		
Generator	1	1	1	Faulty Non functional

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			Part of Main Theatre Complex



Obstetric operation theatre 2				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			Part of Main Theatre Complex

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	NO			
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1				
Operation table	1	1	1	Not functional (broken)
Operation lamp, ceiling mounted	2	1	1	Not Working well
Operation lamp, mobile	1	1	1	Faulty
Electro surgical machine	1	0		
Anesthesia machine	1	1		Working No Paediatric airway system
Patient monitor	1	2	1	Missing accessories
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		



Operation theatre 2				
Operation table	1	1	1	Faulty
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	0		
Electro surgical machine	1	1		Needs a stabilizer
Anesthesia machine	1	1		Needs accessories
Patient monitor	1	2		Needs accessories
Operating microscope	0	1		Needs bulb
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		

Operation theatre 3				
Operation table	1	1	1	Faulty
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	1	1	
Electro surgical machine	1	0		
Anesthesia machine	1	0		
Patient monitor	1	0		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	1	1	
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		Medicine fridge needed Anaesthetic cupboard - 2 present 2 faulty

General patient recovery				
(2)				
Recovery bed	2	4	4	
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1	0		
Defibrillator	1	0		



A&E				
Beds	10	14	2	
Examination bed	2	1		
Treatment lamp, mobile	1	1		
Treatment table	1	0		
Oxygen concentrator	2	0		
Autoclave	1	1	1	
Suction pump	2	2	2	
Humidifier	1	2	2	
Patient monitor	2	0		
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0	0		
A&E Infrastructure	1	1		Not adequate needs ultrasound, ECG, X-ray

ICU / HDU				
Patient bed	6	6 ICU & 7 HDU		
Patient monitor	6	20		All need battery replacement
Central Monitoring post	1	1		
Lamp, mobile	3	0		
Patient ventilator	3	6	2	Remaining 4 need battery replacement, service and calibration
Suction pump	3	14	4	Valves are faulty
Infusion pump	6	6		
Oxygen concentrator	3	0		Oxygen manifold bank but piping leaking
Defibrillator	1	2		
Bloodgas analyzer	1	0		
Haemaglobine meter	1	0		
Electrolyte analyzer	1	0		
Lab Refrigerator	1	0		
Lab Freezer	1	0		
Centrifuge	1	0		
ICU Infrastructure	1	1	1	New building constructed in 2011 and equipped by Assist International (all GE Equipment)

NICU				
(8)				
Cot, baby	4			
Radiant heater	2			
Phototherapy lamp	2			
Open incubator with heater	0			
Open incubator with heater and phototherapy	1			
Incubator, baby	4			
Pulsoxymeter	0			



Patient monitor	8			
Central Monitoring post	0			
Ventilator, baby	4			
Suction pump	2			
Oxygen concentrator	2			
Scale baby	1			
Nicu infrastructure	1			No NICU part of Nursery

Nursery room				
(5)				
Cot, baby	5	10	1	
Radiant heater	2	4		
Phototherapy lamp	1	3	1	
Open incubator with heater	0			
Open incubator with heater and phototherapy	0			
Incubator, baby	0	6	3	
Pulsoxymeter	5	4	2	
Patient monitor	0	2	2	
Ventilator, baby	0	0		
Suction pump	1	1		But manual
Oxygen concentrator	2	4	4	
Scale baby	1	3		2 analog, 1 digital
Nursery infrastructure	-	1		Very small unit - Theatre converted. Need fridge for drug, computer for record keeping, central monitory unit, trolley, defibrillator

Delivery room				
Delivery bed	5	4		
Baby scale	2	4		
CTG	2	0		
Suction pump	2	0		
Examination lamp	2	0		
Pulseoxymeter	2	0		
Resuscitation table	1	2	1	
Oxygen concentrator	2	1		
Autoclave	1	0		



Hospital name and info	KABALE			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	2		
X-Ray unit, mobile	1	0		
X-Ray machine, Bucky table, digital	1	1		
X-Ray unit, fixed, analogue		1	1	Works on 20 or more clients daily, very old.
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		
Fluoroscopy system, digital	1	1	1	
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		1		
CR unit, single slot, + PC & monitor		0		
Printer, DICOM	1	0		
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	0		
Generator	1	1		Central 200 kVA

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1	1		
Operation lamp, ceiling mounted	2	2		
Operation lamp, mobile	1	0		
Electro surgical machine	1	1	1	Never been serviced
Anesthesia machine	1	1		
Patient monitor	1	1		
CTG Machine	1	1	1	
Cot, baby	1	0		
Radiant heater	1	0		
Scale baby	1	1		
Defibrillator	1	0		Share the ones in HDU
Suction pump	1	1		
Oxygen concentrator	1	1		Use piped oxygen, prefer cylinder backups
OT infrastructure	1	Good		3 Years old



Obstetric operation theatre 2				
Obstetric OT separate from General OT (Y/N)				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)				
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1 (General)				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	2		
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	0		Use the 2 in HDU
Suction pump	1	1	1	Lacks accessories
Oxygen concentrator	1	1	1	Very old, mainly use piped oxygen and cylinder backups
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	Good		



Operation theatre 2 (Orthopedic)				
Operation table	1	0		No orthopedic table
Operation lamp, ceiling mounted	2	3		
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	0		Mainly do minor operations using local anesthetics.
Patient monitor	1	0		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	1		
Orthopedic extension set				
OT infrastructure	1	Good		No AC

Operation theatre 3				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

General patient recovery				
(2)				
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			



A&E				
Beds	10	5		
Examination bed	2	0		
Treatment lamp, mobile	1	2		
Treatment table	1	0		
Oxygen concentrator	2	1	1	
Autoclave	1	0		
Suction pump	2	1		
Humidifier	1	0		
Patient monitor	2	1		
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0	0		
A&E Infrastructure	1	1		

ICU / HDU				
Patient bed	6	4		This department is used as recovery room for all the theatre rooms.
Patient monitor	6	0		
Central Monitoring post	1	0		
Lamp, mobile	3	1		
Patient ventilator	3	1		Looks new, Un utilized due to lack of user training
Suction pump	3	2	2	
Infusion pump	6	2		
Oxygen concentrator	3	0		
Defibrillator	1	2		Un utilized due to lack of user training
Bloodgas analyzer	1	0		Central Lab
Haemaglobine meter	1	0		Central Lab
Electrolyte analyzer	1	0		Central Lab
Lab Refrigerator	1	0		Central Lab
Lab Freezer	1	0		Central Lab
Centrifuge	1	0		Central Lab
ICU Infrastructure	1	good		

NICU				
(8)				
Cot, baby	4	0		NICU not active, no neonates
Radiant heater	2	0		
Phototherapy lamp	2	1		
Open incubator with heater	0	0		
Open incubator with heater and phototherapy	1	0		
Incubator, baby	4	3	1	
Pulsoxymeter	0	2		



Patient monitor	8	0		
Central Monitoring post	0	0		
Ventilator, baby	4	0		
Suction pump	2	1		
Oxygen concentrator	2	0		Use cylinders
Scale baby	1	0		
Nicu infrastructure	1	poor		No AC, poorly ventilated

Nursery room				
(5)				
Cot, baby	5			
Radiant heater	2			
Phototherapy lamp	1			
Open incubator with heater	0			
Open incubator with heater and phototherapy	0			
Incubator, baby	0			
Pulsoxymeter	5			
Patient monitor	0			
Ventilator, baby	0			
Suction pump	1			
Oxygen concentrator	2			
Scale baby	1			
Nursery infrastructure	-			

Delivery room				
Delivery bed	5	5	4	Rusty and broken, 300-400 SVDs monthly
Baby scale	2	1		
CTG	2	0		Use manual fetoscope for fetal monitoring
Suction pump	2	0		
Examination lamp	2	1		
Pulseoxymeter	2	1		
Resuscitation table	1	0		
Oxygen concentrator	2	0		Use cylinders and piped oxygen
Autoclave	1	1	1	Table mount very small, send to central sterilization unit which is also challenged unstable power, a power filtration system is a requirement.



Hospital name and info	MASAKA			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	2		75 scans a day up to 1300 per month
X-Ray unit, mobile	1	0		
X-Ray machine, Bucky table, digital	1	0		
X-Ray unit, fixed, analogue		1	1	45 clients daily. Faulty horizontal Bucky.
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		
Fluoroscopy system, digital	1	0		25 per day
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		0		
CR unit, single slot, + PC & monitor		0		
Printer, DICOM	1	0		
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	0		
Generator	1	1		

Obstetric operation theatre 1 (Obs & Gynea)				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	2		LED lights required
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1	1	Very old
Patient monitor	1	1	1	The one available is a vital signs monitor
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	1		
Scale baby	1	1		Very old
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		Piped oxygen is used.
OT infrastructure	1	Good		



Operation theatre 2 (Minor)				
Obstetric OT separate from General OT (Y/N)				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	0		
Operation lamp, mobile	1	1	1	
Electro surgical machine	1	0		
Anesthesia machine	1	1	1	
Patient monitor	1	0		
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	0		
Scale baby	1	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
OT infrastructure	1	1		No A/C at all

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)				
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1 (General and ENT)				
Operation table	1	1		
Operation lamp, ceiling mounted	2	2		
Operation lamp, mobile	1	1	1	Poor quality bulbs
Electro surgical machine	1	1		Faulty as it goes in and off
Anesthesia machine	1	1		
Patient monitor	1	0		
Operating microscope	0	1	1	
Defibrillator	1	1		
Suction pump	1	1	1	Faulty collecting bottles, need to connect to the central vacuum system
Oxygen concentrator	1	0		Noted the use of piped oxygen
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	good		



Operation theatre 2 (Orthopedic)				
Operation table	1	1		
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	0		
Electro surgical machine	1	1		The one shared amongst all the operation theatre rooms is faulty.
Anesthesia machine	1	1		
Patient monitor	1	0		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	1	1	Broken collecting bottles.
Oxygen concentrator	1	0		
C-arm	0	1		The C-arm is fully functional.
Orthopedic extension set		1		They have a fully functional orthopedic extension set.
OT infrastructure	1	good		

Operation theatre 3 (Multipurpose)				
Operation table	1	1		
Operation lamp, ceiling mounted	2	1	1	This is very old
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1	1	
Patient monitor	1	0		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	Good		Needs AC,

General patient recovery				
(2)				
Recovery bed	2	5		
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1	0		They use piped oxygen, though they need for flow meters.
Defibrillator	1	0		



A&E				
Beds	10	6		No wheel chairs, no mobile beds for patient transfer.
Examination bed	2	1		
Treatment lamp, mobile	1	4	4	No maintenance plan + no maintenance budget.
Treatment table	1	6		
Oxygen concentrator	2	1		
Autoclave	1	1		Table mount used is very small, department uses the central sterilizing unit.
Suction pump	2	3		
Humidifier	1	7	3	Need flow meters
Patient monitor	2	2		
Defibrillator	1	1		Not often used
Patient ventilator	0	0		
Operating table	0	2		
A&E Infrastructure	1	Good		

ICU / HDU				
Patient bed	6			
Patient monitor	6			
Central Monitoring post	1			
Lamp, mobile	3			
Patient ventilator	3			
Suction pump	3			
Infusion pump	6			
Oxygen concentrator	3			
Defibrillator	1			
Bloodgas analyzer	1			
Haemoglobine meter	1			
Electrolyte analyzer	1			
Lab Refrigerator	1			
Lab Freezer	1			
Centrifuge	1			
ICU Infrastructure	1			

NICU				
(8)				
Cot, baby	4	8		Average daily admission about 20 or more, staffing challenge; daily Nurse to neonate ratio is 1:30, notable need for syringe pumps, infusion pumps
Radiant heater	2	3	1	
Phototherapy lamp	2	3		
Open incubator with heater	0	0		



Open incubator with heater and phototherapy	1	0		
Incubator, baby	4	4	2	
Pulsoxymeter	0	1	1	
Patient monitor	8	1	1	
Central Monitoring post	0	0		
Ventilator, baby	4	0		
Suction pump	2	1		
Oxygen concentrator	2	1	2	
Scale baby	1	0		
Nicu infrastructure	1	Poor		No ventilation, No AC, very small space

Nursery room				
(5)				
Cot, baby	5			
Radiant heater	2			
Phototherapy lamp	1			
Open incubator with heater	0			
Open incubator with heater and phototherapy	0			
Incubator, baby	0			
Pulsoxymeter	5			
Patient monitor	0			
Ventilator, baby	0			
Suction pump	1			
Oxygen concentrator	2			
Scale baby	1			
Nursery infrastructure	-			

Delivery room				
Delivery bed	5	3	3	They are improvised and broken, need replacement, 30 or more SVDs on daily basis, delivery rooms are very small, with poor ventilation.
Baby scale	2	1	1	Faulty and gives inconsistent results.
CTG	2	0		
Suction pump	2	1		Very old
Examination lamp	2	0		
Pulseoxymeter	2	0		
Resuscitation table	1	1	1	Improvised, needs replacement.
Oxygen concentrator	2	1	1	Faulty
Autoclave	1	1		Table top used is not enough



Hospital name and info	MBALE			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	3			
Ultrasound unit	2	2	1	
X-Ray unit, mobile	1	1	1	
X-Ray machine, Bucky table, digital	1	0		
X-Ray unit, fixed, analogue		1		Old X-ray System
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		
Fluoroscopy system, Digital/ Analogue	1	1		
X-ray infrastructure (Fluoro 35m ²)	1	1		
Film processing unit, automatic		0		
CR unit, single slot, + PC & monitor		1		
Printer, DICOM	2	1		
PACS system, large, with workstation	1	0		
CT-scanner, 64 slices	1	0		
CT infrastructure (90m ²)	1	0		
MRI 1.5 T	1	0		
MRI infrastructure (100 m ²)	1	0		
Generator	1	1		

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	YES			
Operation table	1	0		
Operation lamp, ceiling mounted	2	2	2	
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1		
Patient monitor	1	1		
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	0		
Scale baby	1	0		
Defibrillator	1	0		
Suction pump	1	2		
Oxygen concentrator	1	1	1	
OT infrastructure	1	1		

Obstetric operation theatre 2



Obstetric OT separate from General OT (Y/N)				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	YES			
Recovery bed	2	0		
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1	0		
Defibrillator	1	0		

Operation theatre 1				
Operation table	1	1		
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	0		
Electro surgical machine	1	1		
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	1	1	
Defibrillator	1	0		
Suction pump	1	1		
Oxygen concentrator	1	0		
C-arm	0	1	1	
Orthopedic extension set			0	
OT infrastructure	1		1	



Operation theatre 2				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	0		
Electro surgical machine	1	1	1	
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	1		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		

Operation theatre 3				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	1		
Electro surgical machine	1	0		
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		

General patient recovery				
(2)				
Recovery bed	2	4		But not in good condition
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1	0		
Defibrillator	1	0		



A&E				
Beds	10	26		Not in good condition, all need replacement
Examination bed	2	0		
Treatment lamp, mobile	1	0		
Treatment table	1	0		
Oxygen concentrator	2	1	1	
Autoclave	1	1	1	
Suction pump	2	1		
Humidifier	1	1		
Patient monitor	2	1		
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0	0		
A&E Infrastructure	1			Currently part of OPD, new surgical building under construction

ICU/ HDU				
Patient bed	6	4		
Patient monitor	6	4		
Central Monitoring post	1	0		
Lamp, mobile	3	0		
Patient ventilator	3	2		
Suction pump	3	1		
Infusion pump	6	2		
Oxygen concentrator	3	1		
Defibrillator	1	0		
Bloodgas analyzer	1	0		
Haemaglobine meter	1	0		
Electrolyte analyzer	1	0		
Lab Refrigerator	1	1		
Lab Freezer	1	0		
Centrifuge	1	0		
ICU Infrastructure	1			Part of Surgical Ward - Donation Royal College of Surgeons of England - March 2019

NICU				
(8)				
Cot, baby	4			
Radiant heater	2			
Phototherapy lamp	2			
Open incubator with heater	0			
Open incubator with heater and phototherapy	1			
Incubator, baby	4			
Pulsoxymeter	0			



Patient monitor	8			
Central Monitoring post	0			
Ventilator, baby	4			
Suction pump	2			
Oxygen concentrator	2			
Scale baby	1			
Nicu infrastructure	1			Part of Nursery

Nursery room				
(5)				
Cot, baby	5	16		
Radiant heater	2	0		
Phototherapy lamp	1	3		
Open incubator with heater	0	0		
Open incubator with heater and phototherapy	0	0		
Incubator, baby	0	0		
Pulsoxymeter	5	4		
Patient monitor	0	0		
Ventilator, baby	0	0		
Suction pump	1	1		
Oxygen concentrator	2	3		
Scale baby	1	2		
Nursery infrastructure	-	1		Room to small

Delivery room				
Delivery bed	5	6		But old needs replacement
Baby scale	2	2	1	
CTG	2	0		
Suction pump	2	0		
Examination lamp	2	0		
Pulseoxymeter	2	1		
Resuscitation table	1	1		



Hospital name and info	MBARARA			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	3			
Ultrasound unit	2	1	1	1 Mobile
X-Ray unit, mobile	1	1		
X-Ray machine, Bucky table, digital	1			
X-Ray unit, fixed, analogue		1		Has worked for the last 7 years
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		
Fluoroscopy system, digital	1	0		
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		1		
CR unit, single slot, + PC & monitor		1		
Printer, DICOM	2	0		
PACS system, large, with workstation	1		1	Needs upgrading
CT-scanner, 64 slices	1	1		16 Slice
CT infrastructure (90m ²)	1	1		
MRI 1.5 T	1	0		
MRI infrastructure (100 m ²)	1	0		
Generator	1	0		

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	YES			
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	0		
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	0		
Patient monitor	1	1	1	
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	0		
Scale baby	1	0		
Defibrillator	1	0		
Suction pump	1	1	1	
Oxygen concentrator	1	0		
OT infrastructure	1	0		Located in pre-op. No A/C. No light



Obstetric operation theatre 2				
Obstetric OT apart from General OT (Y/N)				
Operation table	1	1	1	Faulty
Operation lamp, ceiling mounted	2	1		Recommended for LED bulbs
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1	1	Cannot do mechanical ventilation
Patient monitor	1	1	1	Oxygen probe faulty
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	1	1	
Scale baby	1	1	1	
Defibrillator	1	1		Shared with recovery
Suction pump	1	0		
Oxygen concentrator	1	0		Use piped oxygen
OT infrastructure	1			

Obstetric patient recovery				
Obstetric OT apart from General OT (Y/N) (2)				
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	2	2	Needs LED bulbs
Operation lamp, mobile	1	0		
Electro surgical machine	1	1		Old
Anesthesia machine	1	1	1	tidal , volume not accurate, needs servicing
Patient monitor	1	1	1	Faulty capnograph
Operating microscope	0	1	1	Faulty
Defibrillator	1	1		Shared by recovery
Suction pump	1	1		From the central vacuum, very low generated negative pressure
Oxygen concentrator	1	0		
C-arm	0	1		
Orthopedic extension set		0		
OT infrastructure	1	good		



Operation theatre 2				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	1		Shared by one in recovery
Suction pump	1	0		Central vacuum system
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	good		

Operation theatre 3				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	0		
Electro surgical machine	1	0	1	
Anesthesia machine	1	1	1	
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	1		
Suction pump	1	1		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	good		

General patient recovery				
(2)				
Recovery bed	2	2		5 bed capacity still lacks some beds
Patient monitor	2	2		
Lamp, mobile	1	0		
Oxygen concentrator	1			Use piped oxygen + Back up cylinders. Challenged by power shortages.
Defibrillator	1	1		Shared by all theatre rooms



A&E				
Beds	10	10		
Examination bed	2	2	2	
Treatment lamp, mobile	1	2	2	
Treatment table	1	2		
Oxygen concentrator	2	0		
Autoclave	1	1		
Suction pump	2	1		
Humidifier	1	1		Lacks flow meters
Patient monitor	2	2	2	
Defibrillator	1	1		
Patient ventilator	0	0		
Operating table	0	1		
A&E Infrastructure	1	Good		

ICU / HDU				
Patient bed	6	8	5	Electronic beds broken,
Patient monitor	6	8	8	No accessories
Central Monitoring post	1	1		faulty
Lamp, mobile	3	4	1	
Patient ventilator	3	11	11	Lack accessories, 5 of them are C-PAPS
Suction pump	3	2		Can use a central vacuum system
Infusion pump	6	0		
Oxygen concentrator	3	0		Can use piped oxygen + cylinder backups
Defibrillator	1	1	1	Needs a power filtration system
Bloodgas analyzer	1	1	1	Obsolete, no consumables, training equipment users and technicians is a necessity.
Haemaglobine meter	1	0		
Electrolyte analyzer	1	0		
Lab Refrigerator	1	0		
Lab Freezer	1	0		
Centrifuge	1	0		
ICU Infrastructure	1	Good		

NICU				
(8)				
Cot, baby	4	26		
Radiant heater	2	2	1	
Phototherapy lamp	2	6		Fire fly preferred
Open incubator with heater	0	1		
Open incubator with heater and phototherapy	1	0		
Incubator, baby	4	3		
Pulsoxymeter	0	2		
Patient monitor	8	0		



Central Monitoring post	0	0		
Ventilator, baby	4	0		Central vacuum system used
Suction pump	2	2	2	Mostly use piped oxygen, requires a dedicated oxygen manifold for the department, more oxygen distributors and regulators required.
Oxygen concentrator	2	1		
Scale baby	1	poor		Limited space, no AC, poor lighting, department needs total upgrade.
Nicu infrastructure	1			

Nursery room				
(5)				
Cot, baby	5			
Radiant heater	2			
Phototherapy lamp	1			
Open incubator with heater	0			
Open incubator with heater and phototherapy	0			
Incubator, baby	0			
Pulsoxymeter	5			
Patient monitor	0			
Ventilator, baby	0			
Suction pump	1			
Oxygen concentrator	2			
Scale baby	1			
Nursery infrastructure	-			

Delivery room				
Delivery bed	5	2	2	
Baby scale	2	1		
CTG	2	0		
Suction pump	2	0		
Examination lamp	2	0		
Pulseoxymeter	2	0		
Resuscitation table	1	1		



Hospital name and info	MOROTO			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	1		Sonoscape AS unit
X-Ray unit, mobile	1	0		
X-Ray machine, Bucky table, digital	1	1		
X-Ray unit, fixed, analogue		0		
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	1		
Fluoroscopy system, digital	1	0		
X-ray infrastructure (Fluoro 35m ²)	1	1		But area used for Bucky System
Film processing unit, automatic		0		
CR unit, single slot, + PC & monitor		0		
Printer, DICOM	1	1		
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	1		MRI and CT room infrastructure
Generator	1	1		Running the whole hospital

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			

Obstetric operation theatre 2



Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	NO			
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1				
Operation table	1	3	1	
Operation lamp, ceiling mounted	2	2		
Operation lamp, mobile	1	1		
Electro surgical machine	1	1		
Anesthesia machine	1	2		
Patient monitor	1	2		
Operating microscope	0	0		
Defibrillator	1	1		
Suction pump	1	2		
Oxygen concentrator	1	2		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		Use Casualty Theatre as main theatre 2 operations in one room WB structure

Operation theatre 2



Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

Operation theatre 3				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

General patient recovery				
(2)				
Recovery bed	2	3		
Patient monitor	2	0		
Lamp, mobile	1	2		
Oxygen concentrator	1	0		
Defibrillator	1	0		



A&E				
Beds	10	5		
Examination bed	2	1	1	Need replacement
Treatment lamp, mobile	1	3	1	
Treatment table	1	2		
Oxygen concentrator	2	2	2	
Autoclave	1	0		
Suction pump	2	2	2	
Humidifier	1	0		
Patient monitor	2	1		
Defibrillator	1	1		
Patient ventilator	0	0		
Operating table	0	0		
A&E Infrastructure	1	1		

ICU / HDU				
Patient bed	6			
Patient monitor	6			
Central Monitoring post	1			
Lamp, mobile	3			
Patient ventilator	3			
Suction pump	3			
Infusion pump	6			
Oxygen concentrator	3			
Defibrillator	1			
Bloodgas analyzer	1			
Haemaglobine meter	1			
Electrolyte analyzer	1			
Lab Refrigerator	1			
Lab Freezer	1			
Centrifuge	1			
ICU Infrastructure	1			No ICU or HDU need to transfer patient to other facility

NICU				
(8)				
Cot, baby	4			
Radiant heater	2			
Phototherapy lamp	2			
Open incubator with heater	0			
Open incubator with heater and phototherapy	1			
Incubator, baby	4			
Pulsoxymeter	0			
Patient monitor	8			



Central Monitoring post	0			
Ventilator, baby	4			
Suction pump	2			
Oxygen concentrator	2			
Scale baby	1			
Nicu infrastructure	1			Part of Nursery currently in WB building (MRI room) to be moved to new Maternity building

Nursery room				
(5)				
Cot, baby	5	8		
Radiant heater	2	2		
Phototherapy lamp	1	3		
Open incubator with heater	0	1		
Open incubator with heater and phototherapy	0	1		
Incubator, baby	0	2	1	
Pulsoxymeter	5	2	1	Not enough
Patient monitor	0	0		
Ventilator, baby	0	0		
Suction pump	1	1		
Oxygen concentrator	2	1		
Scale baby	1	1		
Nursery infrastructure	-			WB building to be moved to new Maternity building

Delivery room				
Delivery bed	5	2		WB Building new maternity building under construction to be completed end 2020
Baby scale	2	1		
CTG	2	0		
Suction pump	2	0		
Examination lamp	2	0		
Pulseoxymeter	2	1		
Resuscitation table	1	0		
Oxygen concentrator	2	1		
Autoclave	1	1		



Hospital name and info	MUBENDE			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	1	1	It has a poor battery, donated in 2014 by imaging 2000, does 20 – 10 scans a day, has only curvilinear and linear probe, does not do specialized scans, lacks the endovirginal probe.
X-Ray unit, mobile	1	1	1	
X-Ray machine, Bucky table, digital	1	1		Does 20-40 clients daily.
X-Ray unit, fixed, analogue		0		
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	1		
Fluoroscopy system, digital	1	1	1	No UPS for backup
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		1		Still using the dark room technology.
CR unit, single slot, + PC & monitor		1		
Printer, DICOM	1	1	1	No digital films.
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	0		
Generator	1	1		

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1	1		
Operation lamp, ceiling mounted	2	2		
Operation lamp, mobile	1	0		
Electro surgical machine	1	1		No probe
Anesthesia machine	1	1		
Patient monitor	1	1		
CTG Machine	1	0		
Cot, baby	1	0		
Radiant heater	1	0		
Scale baby	1	1		
Defibrillator	1	0		
Suction pump	1	1		
Oxygen concentrator	1	1		
OT infrastructure	1	1		



Obstetric operation theatre 2				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1	1		
Operation lamp, ceiling mounted	2	2		
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1		
Patient monitor	1	1		
CTG Machine	1	0		
Cot, baby	1	1		
Radiant heater	1	1	1	
Scale baby	1	1		
Defibrillator	1	0		
Suction pump	1	1		
Oxygen concentrator	1	1	1	
OT infrastructure	1	1		

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	NO			
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			



Operation theatre 2				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

Operation theatre 3				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

General patient recovery				
(2)				
Recovery bed	2	3		
Patient monitor	2	2		
Lamp, mobile	1	1	1	
Oxygen concentrator	1	2		
Defibrillator	1	0		



A&E				
Beds	10	24	2	Faulty can't elevate
Examination bed	2	5		
Treatment lamp, mobile	1	4		
Treatment table	1	1		
Oxygen concentrator	2	0		They use piped oxygen
Autoclave	1	1		Small table mount used too small for the department
Suction pump	2	4	2	
Humidifier	1	1		
Patient monitor	2	1	1	
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0	0		
A&E Infrastructure	1	Good		

ICU / HDU				
Patient bed	6			
Patient monitor	6			
Central Monitoring post	1			
Lamp, mobile	3			
Patient ventilator	3			
Suction pump	3			
Infusion pump	6			
Oxygen concentrator	3			
Defibrillator	1			
Bloodgas analyzer	1			
Haemaglobine meter	1			
Electrolyte analyzer	1			
Lab Refrigerator	1			
Lab Freezer	1			
Centrifuge	1			
ICU Infrastructure	1			

NICU				
(8)				
Cot, baby	4	0		
Radiant heater	2	0		
Phototherapy lamp	2	3		
Open incubator with heater	0	1		
Open incubator with heater and phototherapy	1	1		
Incubator, baby	4	5	2	
Pulsoxymeter	0	2		
Patient monitor	8	0		



Central Monitoring post	0	0		
Ventilator, baby	4			
Suction pump	2	1	1	No tubing
Oxygen concentrator	2	0		Use cylinder backup, need for individual flow meters for neonates, need for medical gas analyzers.
Scale baby	1	0		
Nicu infrastructure	1	poor		Too small, not well ventilated, no AC

Nursery room				
(5)				
Cot, baby	5	0		
Radiant heater	2	0		
Phototherapy lamp	1	0		
Open incubator with heater	0	0		
Open incubator with heater and phototherapy	0	0		
Incubator, baby	0	0		
Pulsoxymeter	5	2		
Patient monitor	0	0		
Ventilator, baby	0	0		
Suction pump	1	1	1	Needs Accessories
Oxygen concentrator	2	1	1	
Scale baby	1	1		
Nursery infrastructure	-			

Delivery room				
Delivery bed	5	2	2	12 – 15 SVDs daily, used beds are faulty and rusty
Baby scale	2	0		
CTG	2	1	1	Faulty printer
Suction pump	2	2		
Examination lamp	2	1		
Pulseoxymeter	2	0		
Resuscitation table	1	1		
Oxygen concentrator	2	0		
Autoclave	1	1		



Hospital name and info	NAGURU			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	2		Obs/Abd/Echo Procedures. 2 Portable not in use. Linear probe required.
X-Ray unit, mobile	1		1	Battery Fault
X-Ray machine, Bucky table, digital	1		1	385 patients per month
X-Ray unit, fixed, analogue				
X-Ray unit, mammography, digital	1		1	Missing accessories never used (Cassette)
X-ray infrastructure (Mammo 15m ²)	1		1	Very small upgrade require
Fluoroscopy system, digital	1		1	Not used for some time ± 10 patients per month
X-ray infrastructure (Fluoro 35m ²)	1			Combined with bucky table in same room.
Film processing unit, automatic		1		All analogue + dark room, need digital
CR unit, single slot, + PC & monitor		0		
Printer, DICOM	1	1		For CT only
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	1	1	2 Slice Scanner. File system problem. 30 patients per month.
CT infrastructure (90m ²)	1			Reasonable
Generator	1			Not on backup.

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			Current Obstetric theatre been used for abortions only.



Obstetric operation theatre 2				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	NO			
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1				
Operation table	1	1	1	
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	3	2	
Electro surgical machine	1	1		
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	1		In store wrapped in plastic
Suction pump	1	2	2	
Oxygen concentrator	1	1		
C-arm	0	1		
Orthopedic extension set		0		
Radiant heater	1	1		
OT infrastructure	1	1		AC faulty



Operation theatre 2				
Operation table	1	0		Examination couch used as theatre table
Operation lamp, ceiling mounted	2	1		
Operation lamp, mobile	1	1		
Electro surgical machine	1	0		
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	1		In store still in box
Suction pump	1	0		
Oxygen concentrator	1	1		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		A/C Faulty

Operation theatre 3				
Operation table	1	1		
Operation lamp, ceiling mounted	2	0		
Operation lamp, mobile	1	1		
Electro surgical machine	1	2	1	
Anesthesia machine	1	1		
Patient monitor	1	1		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	3	1	
Oxygen concentrator	1	1	1	
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		General room in theatre complex improvised - Donated Archie Foundation

General patient recovery				
(2)				
Recovery bed	2	4	4	
Patient monitor	2	3	3	No accessories
Lamp, mobile	1	0		
Oxygen concentrator	1	0		
Defibrillator	1	0		



A&E				
Beds	10		2	Space limited need to combine rooms
Examination bed	2		2	No general furniture
Treatment lamp, mobile	1		1	No bulbs
Treatment table	1	1		
Oxygen concentrator	2		2	
Autoclave	1	1		
Suction pump	2		1	
Humidifier	1	0		
Patient monitor	2	1		
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0	1		1 x Diathermy Unit 1 x Anesthesia Machine
A&E Infrastructure	1			General upgrade. No A/C new split

ICU / HDU				
Patient bed	6	2		Ward Beds
Patient monitor	6	1	1	Lack of leads + Battery faulty
Central Monitoring post	1	0		
Lamp, mobile	3	0		
Patient ventilator	3	2		New
Suction pump	3	1		
Infusion pump	6	3		Need battery
Oxygen concentrator	3	1		Cylinders in use
Defibrillator	1	1		
Bloodgas analyzer	1	0		
Haemoglobine meter	1	0		
Electrolyte analyzer	1	0		
Lab Refrigerator	1	0		
Lab Freezer	1	0		
Centrifuge	1	0		
ICU Infrastructure	1			14 x Infusion pumps need more power sockets.

NICU				
(8)				
Cot, baby	4	4		
Radiant heater	2	0		
Phototherapy lamp	2	1		
Open incubator with heater	0	0		
Open incubator with heater and phototherapy	1	2		
Incubator, baby	4	6		Double up 11 babies. Good condition
Pulsoxymeter	0	2	1	



Patient monitor	8	2		Faulty need leads
Central Monitoring post	0	0		
Ventilator, baby	4	0		
Suction pump	2	1		
Oxygen concentrator	2	1		
Scale baby	1	1		Old analogue
Nicu infrastructure	1			

Nursery room				
(5)				
Cot, baby	5	0		
Radiant heater	2	0		
Phototherapy lamp	1	2		
Open incubator with heater	0	0		
Open incubator with heater and phototherapy	0	1		
Incubator, baby	0	2	1	
Pulsoxymeter	5	0		
Patient monitor	0	2		Missing accessories
Ventilator, baby	0	0		
Suction pump	1	0		
Oxygen concentrator	2	0		
Scale baby	1	0		
Nursery infrastructure	-	1		Paediatric Ward room converted to Nursery

Delivery room				
Delivery bed	5	2	2	2 Delivery Beds 5 Couches
Baby scale	2	1	1	
CTG	2	0		
Suction pump	2	1	1	
Examination lamp	2	2	2	
Pulseoxymeter	2	0		
Resuscitation table	1	0		
Oxygen concentrator	2	1	1	



Hospital name and info	SOROTI			
Equipment per department	AMPC	Available	Faulty	Notes:
Imaging	2			
Ultrasound unit	2	0		
X-Ray unit, mobile	1	0		
X-Ray machine, Bucky table, digital	1	0		
X-Ray unit, fixed, analogue		1		
X-Ray unit, mammography, digital	1	0		
X-ray infrastructure (Mammo 15m ²)	1	0		
Fluoroscopy system, digital	1	0		
X-ray infrastructure (Fluoro 35m ²)	1	0		
Film processing unit, automatic		0		
CR unit, single slot, + PC & monitor		0		
Printer, DICOM	1	0		
PACS system, compact, with workstation	1	0		
CT-scanner, 16 slices	1	0		
CT infrastructure (90m ²)	1	0		
Generator	1	1		

Obstetric operation theatre 1				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			



Obstetric operation theatre 2				
Obstetric OT separate from General OT (Y/N)	NO			
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
CTG Machine	1			
Cot, baby	1			
Radiant heater	1			
Scale baby	1			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
OT infrastructure	1			

Obstetric patient recovery				
Obstetric OT separate from General OT (Y/N) (2)	NO			
Recovery bed	2			
Patient monitor	2			
Lamp, mobile	1			
Oxygen concentrator	1			
Defibrillator	1			

Operation theatre 1				
Operation table	1	2	2	Old and faulty
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	2	2	
Electro surgical machine	1	1	1	
Anesthesia machine	1	2		
Patient monitor	1	2		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		2 Operations in one room very old building



Operation theatre 2				
Operation table	1	1	1	Old
Operation lamp, ceiling mounted	2	1	1	
Operation lamp, mobile	1	0		
Electro surgical machine	1	0		
Anesthesia machine	1	1		
Patient monitor	1	0		
Operating microscope	0	0		
Defibrillator	1	0		
Suction pump	1	0		
Oxygen concentrator	1	0		
C-arm	0	0		
Orthopedic extension set		0		
OT infrastructure	1	1		

Operation theatre 3				
Operation table	1			
Operation lamp, ceiling mounted	2			
Operation lamp, mobile	1			
Electro surgical machine	1			
Anesthesia machine	1			
Patient monitor	1			
Operating microscope	0			
Defibrillator	1			
Suction pump	1			
Oxygen concentrator	1			
C-arm	0			
Orthopedic extension set				
OT infrastructure	1			

General patient recovery				
(2)				
Recovery bed	2	0		
Patient monitor	2	0		
Lamp, mobile	1	0		
Oxygen concentrator	1	0		
Defibrillator	1	0		



A&E				
Beds	10	3	3	Old not functional
Examination bed	2	0		
Treatment lamp, mobile	1	0		
Treatment table	1	0		
Oxygen concentrator	2	1	1	
Autoclave	1	2		
Suction pump	2	1		
Humidifier	1	0		
Patient monitor	2	0		
Defibrillator	1	0		
Patient ventilator	0	0		
Operating table	0	0		
A&E Infrastructure	1	0		Not available improvising from OPD infrastructure

ICU / HDU				
Patient bed	6			
Patient monitor	6			
Central Monitoring post	1			
Lamp, mobile	3			
Patient ventilator	3			
Suction pump	3			
Infusion pump	6			
Oxygen concentrator	3			
Defibrillator	1			
Bloodgas analyzer	1			
Haemaglobine meter	1			
Electrolyte analyzer	1			
Lab Refrigerator	1			
Lab Freezer	1			
Centrifuge	1			
ICU Infrastructure	1			No ICU Infrastructure

NICU				
(8)				
Cot, baby	4			
Radiant heater	2			
Phototherapy lamp	2			
Open incubator with heater	0			
Open incubator with heater and phototherapy	1			
Incubator, baby	4			
Pulsoxymeter	0			
Patient monitor	8			



Central Monitoring post	0			
Ventilator, baby	4			
Suction pump	2			
Oxygen concentrator	2			
Scale baby	1			
Nicu infrastructure	1			Part of Nursery

Nursery room				
(5)				
Cot, baby	5	0		
Radiant heater	2	0		
Phototherapy lamp	1	1		
Open incubator with heater	0	0		
Open incubator with heater and phototherapy	0	0		
Incubator, baby	0	0		
Pulsoxymeter	5	0		
Patient monitor	0	0		
Ventilator, baby	0	0		
Suction pump	1	0		
Oxygen concentrator	2	0		
Scale baby	1	0		
Nursery infrastructure	-	1		Not adequate, improvised

Delivery room				
Delivery bed	5	3	1	
Baby scale	2	1		
CTG	2	0		
Suction pump	2	0		
Examination lamp	2	0		
Pulseoxymeter	2	1		
Resuscitation table	1	0		
Oxygen concentrator	2	0		
Autoclave	1	0		

