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AFRICA HEALTHCARE DEVELOPMENT TRUST (AHDT)

GUMEL PROJECT

(FEBRUARY 15-26, 2010)

FINAL REPORT

This is the report of AHDT's 2-week health system improvement project at Gumel General Hospital in Jigawa State, Nigeria between 15th and 28th February 2010

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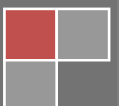

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1 INTRODUCTION & EXECUTIVE SUMMARY FROM THE CHAIRMAN

African Health Care Development Trust (AHDT) (http://www.ahdt.org), a UK-based charity has successfully completed a 2-week health system improvement project at Gumel General Hospital, Jigawa State Nigeria between 15th and 26th February 2010. This is borne out of the need to contribute our training and expertise towards the government's drive to improve health care service across the state. AHDT has over the past 5 years been investing its efforts to see to the transfer of skills and promoting cost effective practical surgical techniques for common surgical conditions such as hernias, prostates, cataracts as well as maternal and child health services. To ensure sustainability of this health programme, we invited colleagues from Aminu Kano University Teaching Hospital and ABU Teaching Hospital Zaria to collaborate with us in delivering the project. AHDT is prepared to continue these ventures to help achieve the millennium development goals (MDG).

We had 4 teams during this visit: medical, surgical, paediatrics/maternity & ophthalmology (the report of each of these teams is included in subsequent sections). During the 2 weeks, 500 medical patients were treated, 79 eye surgeries were carried out and 88 surgical procedures undertaken. The Paediatric team trained all the 35 hospital staff and 37 traditional birth attendants (TBAs) all involved in the delivery process on newborn resuscitation skills. Safe motherhood initiative training was also given to midwifery staff. Medical conditions treated include diabetes, hypertension, infectious diseases and meningitis. We were able to improve hygiene/cleanliness of the hospital environment especially the labour/maternity units which were sub-optimal. Educational sessions were held with the laundry staff to emphasize the important role their services contribute to the running of the hospital and the need to improve their skills. Infection control, including hand hygiene practices, was taught and incorporated into daily medical/nursing practices.

During our visit we met many committed staff in the hospital working tirelessly against all the odds with very meagre resources. They have been inspirational to us all. However, we have also observed instances of poor attitude to work which can be improved and need addressing.

To be able to provide a qualitative health service to the populace, the three tiers of government will need to increase budgetary allocation to the health service so that funding to this sector will approach WHO recommendations. It is absolutely critical that all service providers co-ordinate their activities in order to minimise duplication and reduce wastage of limited resources.

AHDT donated medicines and neonatal resuscitation equipment to the hospital worth **£3080.59 (Three Thousand and Eighty Pounds and Fifty-Nine Pence)** only, including anti-hypertensives, anti-diabetics, antibiotics, resuscitation manikins Ambou bags and surgical mesh for hernia repairs. In addition, surgical instruments and Opthalmology consumables were purchased locally at a sum of **N270.000.00 (Two Hundred and Seventy Thousand Naira)** only. These materials were given to patients free of charge. Some of the medicines were dispensed to patients treated during the two-week project. A local committee was set up to continue dispensing the remaining medicines to needy patients. Every Traditional Birth

Attendant that we trained on newborn resuscitation skills (37 TBAs) was given an Ambou bag, face mask, and an air way to be used for newborn resuscitation.

We would like to thank the state government for accepting our request to undertake this health project at Gumel General Hospital, and the Emirate Foundation for providing administrative and logistical support. Our special thanks go to the Chief Medical Officer of Gumel General Hospital, Dr. Abba Habib and his staff for being our good hosts. Our most profound thanks go to His Royal Highness Alhaji Ahmed Mohammed Sani, the Emir of Gumel, for his fatherly support and hospitality. Finally, we would like to express our sincere gratitude to Alhaji AbdulSalam Mohammed, without whose support we would not have been able to accomplish this project. We remain immensely grateful to you all.

We hope that this project will serve as a stimulus for co-operation between AHDT and the state government, which has the mandate to ensure the roll-out and sustainability of such a programme across Jigawa State. Funding for such projects has been a major obstacle, and we hope that future programmes will receive government support in the form of grants.

Thank you very much. God bless.

Dr. Ibrahim Jalo Hassan
Chairman, AHDT

2 PROJECT COORDINATOR'S REPORT

2.1 Introduction

AHDT would like to thank the state government for granting us the permission to undertake this health system improvement programme at Gumel General Hospital. We are particularly grateful to Gumel Emirate Foundation for supporting this project and providing the vital logistics and hotel accommodation for both the UK and local staff through its local organising committee. We hope that this will be the beginning of a long-lasting working relationship to improve health care services across the state. At the end of the two weeks, we all felt that we were able to make useful contributions in various specialities in the hospital and also contributed to the current Maternal and Child Health services by providing the newborn resuscitation care training to all front line staff involved in the delivery process, both in the hospital and community (Traditional Birth Attendants), and also taught midwives the principles of safe motherhood. The sustainability of this programme is crucial in the long term to ensure that the current trends of infant and maternal mortality are reduced.

2.2 Objectives of the visit

- To establish contacts and explore existing health services
- To develop joint aspirations for future visits
- To work towards improving the health system by delivering service and exchange of skills with existing manpower
- To bring about a positive improvement in the existing services and work collaboratively
- To lay the foundation for sustainability by practically transferring ownership of skills and make other improvements

2.3 Projects

The project covered service delivery, training of existing medical staff on surgical skills, medical care, maternity service and newborn care (MCH). Below is a list of the key activities carried out:

- The visiting team carried out surgical procedures on cases which include hernias, hydroceles, appendicitis, acute abdominal emergencies and cataract surgeries.
- Treatment and training of medical staff on the management of common medical and paediatric conditions.
- Training of existing medical staff on competency skills of the procedures undertaken and also on post operative after care of patients.
- Training of frontline staff involved in the delivery process on Newborn Life Support skills using the NLS (Neonatal Life Support) training.
- Safe motherhood initiative, training of midwifery staff and reorganization of delivery service.
- Review of hospital management and health system improvement measures.

2.4 Infrastructure

General Hospital Gumel is quite a large hospital considering its location but perhaps born out of the necessity to serve a much wider community encompassing Gumel and adjourning local government areas. This makes it strategically located with a potential to deliver a good health service to its community. It has medical, paediatric, surgical and obstetric departments. Serving these units is an emergency medical unit and an obstetric emergency section all attending to medical emergencies and running a triage service. There is a functional operating theatre for general surgery, obstetrics and trauma cases. The hospital has a new ophthalmic suite with a functional operating theatre equipped with a modern operating microscopic. There is a resident consultant ophthalmologist.

The general outline of the hospital is excellent with well laid spaced buildings allowing for good ventilation. The hospital surrounding is clean which, however, is a far cry from the interior of the wards, theatre and maternity which are all unkempt and in need of a more thorough and regular cleaning. There were some infrastructural changes going on when we visited with new ward extensions and renovation of some of the existing wards which were indeed in need of a much needed face lift. Despite the 200 bed capacity of the hospital, there are still patients being admitted on the floor of the wards particularly in maternity.

There was no oxygen supply in the hospital and this includes the main operating theatre when we arrived. Before our departure, however, the hospital had embarked on the purchase of oxygen to be supplied to the wards, delivery suite and the operating theatre. Although the hospital runs a revolving fund, there seem to be difficulties in the procurement of equipment and consumables.

2.5 Basic utilities

2.5.1 Water supply

The hospital's main water supply is from an overhead water reservoir which is shared with the hospital staff quarters. This reservoir is fed by a bore-hole with a pressured water pumping device to deliver water into it. We identified the following problems:

- Water supply to the hospital is dependent on the availability of electricity to power the pressurised water pump that will help to deliver water from the underground to the overhead reservoir.
- A full reservoir lasts for only 2 hours as it is shared with the hospital's staff quarters.
- Most of the water delivery points in the hospital are either broken or non functional meaning that even when the water reservoir is full, there is still no running tap water to some vital parts of the hospital.
- The hospital provides diesel every so often to power the water pump to provide limited supply of water which is grossly inadequate.

AHDT team's recommendation

AHDT, together with the hospital management, has embarked on a phased approach to maintaining broken pipes in the maternity unit and theatre.

Short term goals:

- The hospital to provide water reservoirs (tanks in the delivery suite and theatre) to supplement existing inefficient hospital water supply.
- The hospital has agreed to undertake this project given its “smallish” nature and has started working towards actualising this goal beginning with the delivery suite.

Long term goals:

- The state government through the state’s water board to assist the hospital in providing a twin water reservoir tank dedicated to supply the hospital alone with portable water.
- The government to assist the hospital with funding for purchase of diesel to provide electricity that will power the pressurised water pumping machine.

2.5.2 Electricity

Electricity supply is not regular with power cuts lasting up to 20 hours a day. The hospital has two power generating plants one of which is quite new but not in working condition because it needs new parts. This means that the main source of electricity supply is the second older generating plant which can only be run for a few hours at a time.

Diesel supply to run the generator is provided by the hospital from its modest monthly allocation. Maintenance of such heavy duty electricity generating plant requires expertise and is capital intensive and far out of the reach of the hospital as is evident from one of the generating plants that is in need of new parts and servicing. The hospital on its part has been earmarking some limited funds on a monthly basis to buy diesel to help provide electricity through the generating plant. This is for up to a maximum of 4 hours during the working day, which is grossly inadequate. We appreciate that the dwindling supply of electricity is a national problem but until this is rectified, an alternative source of regular electricity supply will be of immense benefit to the hospital.

AHDT team’s recommendation

- The state government to assist the hospital with extra funding to meet the overhead cost of this essential service.
- Assistance from the appropriate government agency with new parts for the second newer electricity generating plant in need of repairs.
- Assistance from the state government with the expertise to service and maintain the two electricity generating plants on a periodic basis as recommended by the manufacturers.

2.5.3 Laundry

The laundry has not had any update in terms of facilities and manpower since it was commissioned on the same date the hospital was officially commissioned in 1975. The following were also observed:

- The facilities are outdated - one charcoal iron, two rusted washing tubs (manual washing tubs).
- The environment is in need of renovation work and infection control measures.
- The service is understaffed; there are three employees: the head of the service who is coming to retirement and two casual young inexperienced workers.
- Laundry is done manually and considering the amount of linens to be washed every day (200 bed linens from the wards and additional theatre gowns), linens are turned around unclean. This is a potential source of infection, and a serious infection control measure and needs urgent attention.
- There is also the risk of needle stick/cuts injuries from needles and sharps left embedded in linens.

Most urgent needs:

- Large scale washer
- Hot water facility (water heater)
- Appropriate washing detergent (biological washing powder recommended)
- Washing disinfectant
- Protective hand gloves
- Aprons

2.5.4 Ambulance service

The hospital has one unserviceable Peugeot estate car ambulance. This ambulance is bare with no equipment. It is also no longer road worthy as a result of which patients are transported by relatives in unsuitable vans and cars. The hospital desperately needs an ambulance. The ambulance driver also needs basic para medical training.

2.5.5 Infection control

Infection contributes to deaths within a hospital setting. During the team's visit a patient died virtually every day from various illnesses, aside from malaria, some cases presumed to be from sepsis. Unfortunately, the basis on which a diagnosis of sepsis is often made is by blood cultures which is not available in the hospital.

It is not safe to run a modern hospital without a constant supply of clean water. Many areas of the interior of the hospital (wards) are not hygienically up to standard because of the lack of running tap water and hand washing facilities, and clean conveniences. Water is currently collected in plastic reservoirs with a communal collection bowl which can be easily contaminated. This should be a priority for the hospital management.

2.6 Manpower

2.6.1 Doctors

The hospital has 4 medical officers, 2 of whom are inexperienced youth corps members in need of training. The latter are not equipped with surgical and obstetric skills, and have not yet

grasped the concept of diagnosing and effectively managing common childhood and adult illnesses, the majority of which require specialist skills at a senior level. This essentially leaves the hospital with 2 medical officers one of whom is saddled with the administrative responsibilities of running the hospital, leaving dedicated time for clinical activity to 0.5 Whole Time Equivalent (WTE). This is unsafe for patient care and needs the most urgent attention as, essentially, the hospital has only one doctor when the medical officer in charge is away attending to administrative and strategic issues. He is often required to attend strategic and policy meetings at short notice as was the case when I arrived in the hospital before the rest of the project team arrived.

2.6.2 Nursing staff

There is a widespread shortage of nursing staff potentially creating a dire need in this field. Often there is only one nursing staff per shift left to nurse between 20-30 patients. There are few support staff who help provide some basic nursing support to patients, but this does not meet the basic nursing needs of the hospital's clients. This contravenes WHO-recommended patient:nursing ratio of 4 to 1, and erodes existing staff moral who are overworked and often look tired. This is a serious clinical governance issue.

2.6.3 Support services

There are different categories of support staff: electricians, cleaners, plumbers and ward support workers. A lot of these are temporary or casual workers employed by the hospital to meet the acute shortage of manpower. The enthusiasm and dedication to duty among these workers is low. This leaves most of the routine essential daily ward cleaning, equipment maintenance, undone. This is a management issue which we have discussed with the hospital management.

Morale in the hospital is low. There is general apathy among the working force as they are overworked and also feel undervalued. The difference in remuneration for staff in the state and the teaching and associate teaching hospitals (Aminu Kano Teaching Hospital and Federal Medical Centre Birnin Kudu) which are all within the catchment area of the hospital will make recruitment and retention of experienced staff difficult. This will continue to promote brain drain if it is not addressed, and the much needed drive to bring about effective reduction in maternal and infant (MCH) mortality indices may not meet the MDG target.

AHDT is appealing to the state government to help address the acute shortage of doctors and nursing staff at Gumel General Hospital as a matter of urgency, as the situation is unsafe and constitutes a serious clinical governance issue. We would recommend a minimum of 4 experienced Senior Medical Officers to begin with.

2.7 Budgets

The budgetary allocation to the hospital appears inadequate given the number of departments, its catchment area, number of beds and bed occupancy rate. We would urge the state government to review this allocation with a view to rectifying any anomaly within the constraints of available resources.

2.8 Clinical Governance

There are areas of good practice in General Hospital Gumel within the limited resources at its disposal. The Chief Medical Officer has recently introduced an updated guideline for management of eclamptic (hypertension and convulsion complicating pregnancy) patients, which has brought about a reduction in mortality related to this condition. However, there are currently no mortality meetings to discuss cases and learn from mistakes.

We would like to recommend that a clinical governance group be set up in the hospital to oversee governance issues.

2.9 Team work and communication

General Hospital Gumel has no functional telephone system. Doctors and nursing staff communicate by using their personal cell phones. This method of communication is reliant on the good will of such staff. There were several instances when it was difficult to contact the doctor on call because of a poor telephone network or the lack of sufficient air time credit to make such calls. Adequate line of communication (functional internal telephone and pager system) is required.

2.10 Needs Assessment

At the end of each week, an assessment meeting was held between the visiting team, the Chief Medical Officer, the Chief Nursing Officer and various sectional nursing leads to discuss needs and how services could be improved further. These were open discussions.

2.10.1 The need for protocols and guidelines

There are currently no existing protocols or guidelines in use for neonates, general paediatrics, medicine, obstetric services, surgery and emergency care.

AHDT team's advice/measures taken:

- The visiting team left some guidelines from NLS and also some general paediatric resource for the unit to use.
- Medical staff in the hospital should start practising evidence based medicine and to task themselves to evaluate evidence available and critically appraise their current practice.
- Arrangements have been made for various sub speciality visiting leads to send some protocols and guidelines for management of common ailments in their respective fields.

2.10.2 Drug Needs

The hospital has a central pharmacy run by qualified pharmacists. Drugs are purchased and sold to patients on a drug revolving fund. Drugs for maternity and paediatric services (Maternal and Child Health services) are provided free by the state government as part of the state's policy towards improving MCH services. However, not every drug is available in the pharmacy and

families have to go into the town or travel to Kano to buy such drugs from drug stores. This is not safe because some of these drugs may be fake, diluted or expired.

Contaminated infusion fluid procured from the state central store was reported to the marketing manager of the company that manufactured it and is currently being looked into.

AHDT team's advice/measures taken:

- The pharmacy department should audit doctors' prescriptions that they receive and review their stock.

2.10.3 Laboratory Support

The hospital has some basic laboratory services (haematology, microbiology, biochemistry and virology service screening for hepatitis and retro virus) staffed by laboratory scientists (including the head of the unit). There are, however, concerns expressed by medical staff about the accuracy of the results of tests carried out. Unfortunately there are no adequate quality control services to validate results and calibrate laboratory equipment.

AHDT team's advice/measures taken:

- We advised that the service be audited to help assess concordance of results and remedy any potential quality control issues to ensure safe clinical practice.

2.10.4 Equipment

There is an overwhelming need for basic equipment which includes bedding for babies (cots), mattresses, blood glucose monitoring machine, neonatal and paediatric blood pressure monitoring machine with appropriate cuffs, drip stands, weighing scales (adult and paediatrics), temperature probes and phototherapy units for jaundice babies. We are grateful to Dr. Hassana Hussaini Adamu, Director Gunduma Health Services for assisting the hospital with two (2) delivery beds and four (4) baby cots. There is still the need for more delivery beds and other essential equipment.

AHDT team's advice/measures taken:

- The hospital to prioritise needs and start procuring some basic items such as blood pressure monitoring machines, weighing scales and temperature probes.
- The hospital should formally make a request to the Ministry of Health for the supply of larger equipment and facilities.
- AHDT donated 10 boxes of medical consumables which includes various medications and blood glucose monitoring devices amongst others. Distribution of these drugs to needy patients, on an on-going basis, is to be managed by a special local committee.

2.10.5 Accommodation

There is lack of bed space despite the ward expansion work being carried out. The condition is cramped in maternity and delivery suite and potentially compromises infection control.

AHDT team's advice/measures taken:

- Discussion with management of the hospital to try and expedite completion of renovation and ward expansion work and also to install running water and provide oxygen in cylinders to all the wards.
- Most of the interior of the buildings need painting and renovation including the conveniences. This being a major renovation work, we would recommend that the state government assist the hospital with this.

2.10.6 Clinical Care

There is a need to improve on existing clinical practise e.g. hygiene. Currently clinical care for a condition is dependent on the attending health professional on call. There are no standard protocols, no appraisal of the treatment and no accountability. There is a lack of responsibility amongst the junior NYSC doctors in terms of management issues. There are gaps in knowledge and skills on the use of equipment for resuscitation. There are no sharp disposal bins. Sharps are left around the ward.

AHDT team's advice/measures taken:

Management

- The hospital should provide effective and regular sharps disposal facilities. We have found an organisation that specialises in the provision of sharp disposal services (supply of disposal bins and effective disposal of sharps) in Nigeria called OLLEEVE SERVICES NIGERIA (Tel: 08033261520 OR 08051223757).
- Hospital management should also develop and enforce rigorous infection control measures for the hospital.

Training

- The visiting team delivered training in Neonatal Resuscitation. The hospital was left with a manikin, and resuscitation equipment worth £788 to keep updating their skills.
- The state government should extend a service level agreement with tertiary institutions for more senior medical staff to be visiting Gumel General Hospital regularly to build on the training that has been started. AHDT will continue to support this initiative by visiting twice annually.
- There is a need for heightened awareness and training in infection control measures.
- There is also a need for updated learning materials such as books, CDs and access to journals – ICT with internet access.

Traditional Birth Attendant's Bag

- The 37 TBA’s that were trained to provide newborn resuscitation have not been provided with TBA bags.
- The airway equipment that was supplied to each of them by AHDT is supposed to complement the contents of the TBA bag.
- We are urging the relevant authority to provide all the TBA’s with their TBA practice bags complete with their contents.

2.10.7 Clinical practice

- Existing medical staff to work as a team and share information about management of cases.
- Teamwork needs to be promoted to break the old habit of hierarchical order between doctors and nurses.
- Practice of evidence based medicine and critical appraisal of practice.

2.11 Future of the collaboration

Future collaborations should aim to:

- Respond to needs expressed by respective partners
- Undertake tangible projects to ensure sustainability
- Maintain regular lines of communication.

Regular training of neonatal/delivery staff on Neonatal Life Support (NLS) and airway management skills to consolidate the newborn life support course recently conducted by ABUTH, Zaria NLS training team. This will consolidate NLS training thereby ensuring that all front line staff involved with neonatal care are skilled and confident at resuscitating newborn. We urge the state government to see this as a novel way forward and arrange to engage the services of NLS facilitators from ABUTH, Zaria. ABUTH has an existing health link with Stockport NHS Foundation Trust in the United Kingdom. ABUTH NLS facilitators were trained as part of the Stockport-Zaria health link. Some of the facilitators in Zaria have visited the UK on educational visits as part of the training link.

- We would suggest clinical attachment for staff from Gumel General Hospital on a regular exchange programme to gain some management and clinical experience from ABUTH and AKTH, and if resources permit in the UK, to be arranged by AHDT.

- We recommend that a co co-ordinator be appointed in the state (ministry of health) to serve as a contact person between the state and AHDT.

Some aspects of this report may sound negative but the aim is to identify the needs and improve on existing service delivery, ensuring not just the functionality of the hospital, but also the quality and efficiency of services delivered to patients.

2.12 Outcomes

The project was spread across child health which covered newborn resuscitation training, general paediatrics, medical care, surgery, maternity service and ophthalmology. Details of work done and recommendations in these departments are contained in the reports from these specialities which are enclosed.

2.13 Conclusion

The health system improvement link has now been established and the results so far indicates that there is hope that improvements can be made. The extent to which change will occur will depend on the level of commitment from both parties. We were delighted to meet a large number of the hospital staff who, despite the sparse resources at their disposal, continued to work very hard to ensure that a good level of service is provided to patients.

We feel that the next visit to the hospital will consolidate on the good work that has been started and will be centred on capacity building, teaching and training on the wards, clinics and in the community. Knowledge is better shared this way. It will be essential to consolidate on what has been done for paediatrics, medicine, surgery, maternity services and ophthalmology on our next visit, and subsequently extend the same services to other hospitals in the state.

We would very much like to continue to provide training of newborn care to skilled birth attendants (TBAs) and to link with the Gunduma programme in this field. We expect to be guided by you on areas to focus on as this link matures.

AHDT has found this visit to be a pleasant experience and felt it was useful with a lot of prospects to improve services and develop this across the state. We would like to thank Dr. Abba Habib the Chief Medical officer in charge of the hospital for his invaluable support. We are also grateful to the Chief Nursing Officer (CNO) Alhaji Musa Garki for his guidance and in seeing that the entire programme ran smoothly. We enjoyed the support of the management and other staff of the hospital. We hope this will be the beginning of a long lasting working relationship. On behalf of AHDT I would also like to thank the entire members of the project team for their time.

Dr. Abubakar Muhammad Zubairu
Project Coordinator, AHDT

3 MEDICAL OFFICER'S REPORT

3.1 Introduction

The hospital became aware of the AHDT project through a letter received on 5th November 2009 from the chairman/CEO of Gumel Emirate Foundation, Alhaji Muhammadu Aliyu. Later, I had several phone calls from Dr. Abubakar Zubairu (project coordinator) to discuss many issues including the arrival of the AHDT team members from UK, and participants from Nigeria including staff from ABUTH, AKTH and the National Eye Centre.

3.2 Schedule of Activities

A meeting was held on 30th January 2010 with the chairman of Gumel Emirate Foundation (GEF), Commissioner of Health, CMD of the Federal Medical Centre, Birnin Kudu, other doctors and members of the GEF committee. At the hospital level, a meeting was held on 1st February with the hospital management committee, and on 2nd February with the heads of units and wards, during which plans were made for the reception of the visitors. Each head of unit/ward was instructed to hold a meeting with his/her staff to ensure good conduct and to keep their units clean. Minor repairs were made at the main theatre and ophthalmic unit. Dr. Abubakar Zubairu arrived on the 10th February and immediately started on the preparations: he focused on the theatre where he arranged infra-structural improvement programmes, the painting of some materials, and the purchase of new surgical equipment plus extra items for our incomplete sets.

3.3 Expectations

Our expectation before 15th February was that of capacity building, for new surgical procedures and care of the newborn, but we got much more than this, including:

- Procurement of surgical materials, paint, and electrical material for the maternity department
- Provision of diesel for running the generator
- Structural reorganisation of the maternity ward/delivery suite
- Counselling/advice on attitudes to work, and general staff conduct
- Intervention in the hospital laundry towards improving its services
- Advice on general aseptic and septic conditions
- Wake-up advice and intervention methods in dealing with staff indiscipline and/or poor work ethic
- Free surgical intervention (not only hernia/hydrocele) for the community and also capacity building of the local hospital staff
- Training of all staff in newborn resuscitation and child care
- Capacity building of staff on proper care and management of paediatric cases
- General consultation for the whole community with provision of free drugs
- Completion of about 80 cataracts surgeries
- Links with staff from ABU Teaching Hospital Zaria and Aminu Kano Teaching Hospital Kano.

I cannot write in words to describe all the good intervention you have done, and the impact you have made on the hospital community.

We hope to see many more visits. On behalf of the entire staff of Gumel General Hospital, I wish to thank you, and pray for God's guidance and protection in your activities.

Dr. Abba Habib
CMO, General Hospital Gumel/Chairman HMC

4 REPORT FROM THE MEDICAL TEAM

4.1 Introduction

The team commenced work on Monday 15th February 2010. The following key activities were carried out over the period:

- Daily outpatient clinics were held in the mornings, 15th – 25th February.
- Ward rounds were held in the afternoons of Tuesdays, Wednesdays and Thursdays.
- Meetings were held with some members of the department to discuss key issues regarding patient management and organization of patient care.
- A diabetic care team was formed of local staff to streamline and co-ordinate the care of diabetic patients as a group requiring specialized and long term care.
- Development of protocol for the care of diabetic patients.
- Report prepared with recommendations for improvement of medical care of patients.

4.2 Outpatient clinics

Over 500 patients were seen in the female outpatient clinic during the period of the exercise. The majority (90%) were females, but a number of male patients (~10%) were referred from the separate male outpatient clinic. About 40% of the overall patients were hypertensive, 30% diabetics, 20% diabetics/hypertensives and the remaining 10% consisting of various medical conditions such as bronchial asthma, hepatitis, chronic kidney disease, etc.

4.3 Inpatient care

Many patients were admitted into the medical wards and managed with various medical conditions. Some were discharged, while others will continue to receive treatment monitored by the local medical team. One patient with septic shock, who was admitted before the exercise, died on admission. Many patients who were admitted before the exercise started, or those admitted via casualty by the local staff were also reviewed by us during routine ward rounds.

4.4 Formation of the diabetic care team

A diabetic care team was formed, comprising the following:

- Dr. Babalola - head of the team
- Sister Uche - in charge of female medical ward, secretary
- Ms Monica – Dietician, member
- Dr. Habib Saddiq – Ophthalmologist, member
- Nurses in charge of diabetic clinic, male medical ward, and A/E as members
- Diabetic care support equipment

Three glucometers and test strips were provided to support the care of patients with diabetes mellitus. These will be utilized in the A/E and the wards as well as outpatient clinics.

4.5 Problems encountered and other observations

- Screening of patients before referral to medical team needs to be improved. Valuable time was wasted as a result of the medical team having to see and refer patients to other units with various conditions in gynaecology, obstetrics, surgical, paediatrics.
- Outpatient care and follow up of patients with medical conditions is rather patchy and often nonexistent. Many patients with despite availability of appropriate investigations have often and in some cases never had the tests carried out.
- Record keeping on the wards and General OPD is often poor.
- Inadequate staffing on the ward and outpatient clinic: this compromises good patient care. Adequate Staffing level is a prerequisite to good patient management and staff morale
- Nursing care services are inadequate. There are no observation charts, fluid balance or treatment charts available.
- Observation clearly showed a number of staff are taking on responsibility not in keeping with their level of training. This has led to wrong diagnosis and management.

4.6 Recommendations

- There is a need for training and continuing medical education of medical and nursing staff.
- Improvement of staffing and equipment should be given priority by both the hospital and the state government.
- Ensure the utilization of nursing care charts (as per attached).
- The line managers for all level of staff from Doctors, nurses, Community Health Officers (CHEWS) need to ensure that staffs take on responsibility within limits of their competency. This is very important in particular for staff that may work outside the hospital physical boundary.

Dr. Bappa Adamu
Consultant Physician, Nephrology
Aminu Kano Teaching Hospital, Kano

5 REPORT FROM THE SURGICAL TEAM

5.1 Introduction

The programs of the team started on 14th February 2010 at about 7.00PM with a meeting where we had introductions and discussion of the objectives and modalities of the project. This was immediately followed by a visit to His Royal Highness the Emir of Gumel. Medical services started on 15th February with a plan for the following activities:

Two surgical teams were formed, comprising:

- Dr. Jibril A. J. and Dr. Ahmad M. (Team A)
- Dr. Ahmed A. and Dr. Magaji S. (Team B)

Dr. Habib and Dr. Babalola were often in the theatre to assist and learn basic surgical techniques. The daily schedule of the teams included scheduled operations performed in the operating theatre, ward rounds to review admitted and operated patients, and a surgical outpatient clinic to select and prepare patients for surgery.

On several occasions, the teams had meetings with laundry, theatre and surgical ward staff to discuss patient care, theatre technique, and infection control measures. The arrangement was such that if team A was in the theatre, team B would conduct surgical outpatient clinic and ward rounds. Overall, both teams had 10 operation sessions, extending from 9AM to 5PM daily (5 days per week). Emergency surgery was performed out of hours and up till midnight on one occasion.

5.2 General Environment

Surgical Out Patient Clinic

Surgical outpatient clinics were held in the medical officer's office with 3 chairs, 1 table and a couch. There was no facility for aseptic hand washing and drying. This compromises infection control. However, we had disposable gloves, spirit and hand sanitiser. Although the program was meant to treat patients with hernia and hydrocoele, we saw and treated a wide spectrum of surgical diseases in the clinic.

5.3 Theatre

- We were generally welcomed; relationships between us and the theatre staff were cordial
- Staff were hardworking and showed a lot of interest in learning new techniques
- Theatre facilities were inadequate for the level of the hospital. There was no oxygen supply when we started the project but this was procured by hospital management before our departure. The anaesthetic machine was not functional. The diathermy machine and suction equipment were on their last legs. There is no resuscitation trolley.

- We occasionally had to wait for gowns to be sterilised as there was only one autoclave for the sterilisation of instruments/gowns.
- The supply of electricity was erratic and some operations had to be completed without adequate lighting
- Water supply was very irregular
- Laundry services were not well done: some gowns still had stains/debris on them after processing
- Surgical consumables in short supply and in very limited range to suit particular patient needs (sutures, gloves, xylocaine).

5.4 Wards

- Could be cleaner and do with some painting
- Infection control measures need sharpening
- Generally somewhat understaffed
- Patients' vital signs not routinely recorded
- Staff seemed keen and generally receptive to constructive criticism.

5.5 Supporting Facilities

- Labs - were prompt in performing required investigations within available facilities
- Xray - played their role satisfactorily
- Pharmacy – we provided our own postoperative medications free to the patients who were mostly treated as day cases.

5.6 Staffing

- Staff shortage at Surgical Out Patient Department (SOPD)
- Theatre: staffing levels are generally adequate for volume of work
- Wards: shortage of nursing staff on shifts

5.7 Patient Turnout/Satisfaction

- Generally patient turnout was high with very high expectations
- There is every indication that future programmes will be accepted by the community
- Patient satisfaction and outcome of surgery was excellent. There were no reoperations, significant complications or postoperative deaths during the project period.
- We had wide spectrum of surgical conditions within what was originally planned for.
- The total number of people operated on was 67 (62 electives cases and 5 emergencies)
- Operations totalled 88 (55 patients had 1 operation each; 6 had 2; 3 had 3; and 3 had 4)
- Many of the patients had recurrent bilateral hernias, a few had bilateral hernias & hydrocoele
- 76.1% had local anaesthetic and 23.9% had general anaesthesia (ketamine).

5.8 Accommodation/Feeding/Transportation

- Accommodation was generally very satisfactory
- Feeding arrangements were also very satisfactory
- Adequate transportation was provided

5.9 Recommendations

- The hospital staff should be fully briefed in future that the AHDT project is a non-governmental charity project, and that visiting participants expect their full cooperation for the project to be successful.
- Medications should be dispensed directly to the patients after surgery in the theatre.
- As a way of encouragement, some incentives should be given to the theatre staff, e.g. a certificate of participation/service.
- Wards and the outpatient department need more nursing staff, though this may be due to the extra volume of work during our visit.
- There is a need to reintroduce patient observation charts as this is an essential part of patient care.
- The hospital should embark on implementing infection control measures all over the hospital.
- The laundry service is in need of rejuvenation as a matter of urgency.
- There is an urgent need to have a well organized medical record department in the hospital to ensure continuity of care.

Dr. Adamu Ahmed
Department of Surgery
ABU Teaching Hospital, Zaria

6 REPORT FROM THE OPHTHALMOLOGY TEAM I

6.1 Introduction

Participants on arrival (14 February) paid a courtesy call on the Emir of Gumel and then met to discuss plans and strategies of conducting the project. Team I comprised the following:

- Dr. M. S. Ado - Consultant Ophthalmologist
- Mr. Nuhu Abubakar - Ophthalmic Nurse
- Mr. Sanusi Ibrahim - Ophthalmic Nurse

Day 1: (15 February): After an orientation round the Gumel Hospital by all participants, the Ophthalmology team did a clinic to identify candidates for surgery. A team of the state eye health workers had screened and shortlisted patients with cataract to undergo surgery. From this pool, the AHDT ophthalmology team examined 73 patients:

- 37 males (50.7%) and 36 females (49.3%).
- 47 patients (64.4%) were 40-60 years, while 24 (32.9%) and 2 (2.7%) were >60 years and <40 years respectively.
- 13 patients (17.8%) had bilateral mature cataract while 3 (4.1%) had bilateral immature cataract.
- Others were 13 (17.8%) traumatic cataracts, couching 3 (4.1%), corneal opacity 3 (4.1%), and glaucoma 3 (4.1%) out of which 1 (1.4%) had become blind.
- 15 patients (20.5%) had undergone cataract surgery in one eye previously. 13 patients (17.8%) had intraocular lens while 2 (2.7%) had aphakia.
- 9 patients (12.3%) had moderate to severe systemic hypertension, 1 (1.4%) had diabetes mellitus (all newly discovered), while 1 (1.4%) had limb deformities from Hansen's disease. Patients were referred appropriately.
- 58 patients (79.5%) were booked for surgery while 15 (20.5%) were found unfit for surgery.

Day 2: 10 cases were booked. 7 were operated on; two were cancelled as 1 had immature cataract, 1 had high BP; one patient did not turn up.

Day 3: 8 cases were booked: all were operated on.

Day 4: 10 cases were booked: 9 were operated, 1 had high BP.

Day 5: (Friday) to Day 7 (Tuesday): 10 cases were booked for each of the 3 days.

6.2 Positive Aspects

- Desire /willingness of the populace to receive treatment
- Cooperation from the hospital staff

- Presence of fundamental facilities, e.g. operating theatre with modern functional sterilizer, operating microscope and surgical instruments

6.3 Negative Aspects

- Frequent electricity outages
- No instruments to determine exact intraocular lens power for patients, so lenses were implanted without measurement
- Post operative medications would cover patients for only the 1st week post op. Some patients may not be able to afford to procure the drugs subsequently.

6.4 Opportunities and Threats

The exercise has made an impression on the people and, perhaps, the state government. It may serve as a reference for the government to more actively support future interventions. On the other hand, the nature of local politics in the state may frustrate another future project in Gumel. The government may discourage its staff/employees from giving active support, or even allowing the use of its facilities.

Dr. Muhammad Sani Ado
Consultant Ophthalmologist
Mohammed Abdullahi Wase Specialist Hospital, Kano

7 REPORT FROM THE OPHTHALMOLOGY TEAM II

7.1 Introduction

Day 1: (22 February):

- Preoperative assessment made of 8 patients who had been screened the previous week but could not be operated upon, due to some logistic problems.
- Screened a total of 25 patients in the clinic: 6 found to have cataracts.
- 14 patients had surgery before the close of the day: 5 females (35.7%), 9 males (64.3%); 11(78.6%) were in the age group of 45-65 years, 4 (21.4%) were above 65 years.

Day 2:

- 63 patients were screened and 20 were found with cataracts; surgery completed that day.
- This group was made up of 9 females (45%) and 11 males (55%); 14 (70%) of them were in the age group 45-65 years, 6 (30%) were above 65 years old.

Day 3:

- 34 patients were examined and 15 found with cataracts who were offered surgery.
- (60%) were females and 6 (40%) were males; 10 (66.7%) aged between 45-65 years old and 5 (33.3%) were above 65.

7.2 Positive Aspects

- A good operating theatre with a beautiful operating microscope, hot air sterilizer, 3 cataract sets
- A tremendous understanding and cooperation from the hospital staff
- Good accommodation and feeding provided by the Gumel Foundation.

7.3 Negative Aspects

- Post operative drugs would not last more than a week, while patients needed them for more than 2 weeks; most patients could not afford to buy more, and the 2 weeks post op. is critical.
- Frequent power outages; and usually the operator is not around to start the standby generator.
- Local ophthalmic staff were not initially fully mobilized, so that during the first week they could not do more than 10 cataract surgeries per day.

7.4 Opportunities

This project has impacted positively on the invited medical personnel: they realise that if they give a small percentage from their meagre income, they can organise something similar to help those who cannot afford to pay for medical services.

7.5 Recommendation

Government and some local NGOs should be involved right from the planning stage to avoid the project being frustrated.

7.6 Summary Statistics

Total number of patients who had cataract surgery	49
Total female patients	23 (46.94%)
Total male patients	26 (53.06%)
Total patients between 45 and 65 years	35 (71.4%)
Total patients aged 65 years and above	14 (28.6%)

Dr. Musa Kallamu Shehu
Consultant Ophthalmologist
Federal Medical Centre, Gombe

8 REPORT ON BASIC NEONATAL LIFE SUPPORT AND NEWBORN RESUSCITATION WORKSHOP

8.1 Introduction

This report is compiled on a 10-day training on Neonatal resuscitation, basic newborn care and quality improvement in child care services in the Children's Unit, conducted for relevant health care workers of Gumel General Hospital and traditional birth attendants (TBAs) from neighbouring communities served by the Gumel Hospital in Jigawa State.

8.2 Background

Under-5, Infant and Neonatal Mortality rates are important indices for rating progress of countries. The MDG 4 targets the reduction of under-five mortality rate by two thirds, by 2015. At least one third of Under-5 deaths are due to neonatal causes and of the total number of infants who die each year, 50% die in the first 28 days of life. Seventy-five percent of these infants die in the first week and 40% in the first 24 hours. Up to 98% of all neonatal deaths occur in developing countries alone. The situation in Nigeria is alarming with an abysmal position in the rank of U5 Mortality league of number 14 out of 190 countries. Our country's U5MR was 194, Infant Mortality Rate of 100, Neonatal Mortality Rate of 53 and annual Births of 5.4 mill (2005). The North-west zone of Nigeria which includes Jigawa State, has one of the highest neonatal, infant and under-5 Mortality rates in Nigeria. This has informed the necessity to build capacity of health care providers and TBAs involved in attending to deliveries and caring for newborn babies in order to reverse the trend.

Research has identified simple low cost interventions that could prevent neonatal death and disability, which if integrated and strengthened in existing MCH programs & services could positively impact newborn survival. Programs can support health care providers at facility and community/home settings to adopt practices that save newborn lives through interventions delivered before pregnancy (birth spacing, nutrition, infection control), during pregnancy (birth preparation, ANC, nutrition, infection control, avoidance of stress, early detection and management of complications) and during delivery (skilled attendance, supportive care, infection control and management of complications).

The need for newborn resuscitation is often not predictable and anyone who delivers babies should have basic skills to provide simple resuscitation if necessary. Simple and low cost procedures which can prevent neonatal death and disability include:

- Stimulation or resuscitation of infants who fail to establish spontaneous breathing
- Drying & thermal control measures
- Breast feeding
- Infection control and

- Management of complications

The ABUTH-Stockport NHS Foundation Trust UK collaboration on NLS provides capacity building support and on competency and skills of newborn resuscitation. The team of master trainers in the Paediatrics Department of ABUTH Zaria has since been conducting training workshops on Neonatal Life Support to health facilities for other states of Northern Nigeria. The initiative and effort of the Africa Health Development Trust (AHDT) to organise and partly support this workshop, in conjunction with the Gumel Emirate Foundation (GEF) are giant strides towards addressing the problem of neonatal morbidity and mortality in this part of Nigeria.

8.3 Objectives

The activities are components of a process of capacity building to improve overall service delivery in Gumel General Hospital as an aspect of Gumel Health Development Project embarked upon by the AHDT in conjunction with Gumel Emirate Foundation. The objectives of the capacity building activities were therefore to:

- Train a pool of health service providers on basic skills in newborn resuscitation and neonatal airway management for the Gumel General Hospital.
- Train Traditional Birth Attendants (TBAs) involved in taking deliveries outside the hospitals/maternities on basic newborn resuscitation and care within and around Gumel.
- Provide and inspiration on improving quality of service for staff and the management of Gumel hospital as well as provide recommendations on approach to improving health care delivery in the State to the Jigawa State health authorities.

8.4 Preparation

The AHDT Coordinator, later joined by the ABUTH NLS Lead facilitator was in Gumel and Dutse the penultimate week of the project implementation to finalize logistic and accommodation arrangements for the entire medical team. A preparatory trainers' meeting for the Paediatric Group held on Sunday, February 14th, 2010, the eve of the workshop at the GEF. The meeting served, among other things, to conclude the team's plans for the approach to training and service support issues and to know the logistic arrangements made. The training strategies, methodologies and schedule of activities were reviewed and finally adopted.

8.5 Training Strategies and Methodology

In conformity with the Stockport Foundation Neonatal Life Support curriculum, the training strategy was adopted from material produced by the UK NLS Training. The material included power point lecture slides, Algorithm and NLS Manual for Neonatal Life Support, skill stations and scenario settings with use of manikins and other

resuscitation equipment. The spectrum of activities advocated in the aforementioned curriculum was employed throughout the training for the hospital staff, including:

- Use of didactic lectures, delivered using power-point slides
- Use of interactive interludes in-between the lecture sessions
- Experience sharing
- Skill acquisition stations for practical demonstration of various procedures for newborn resuscitation
- Scenario settings for situations mimicking live newborn cases requiring emergency resuscitation.

The schedule of activities as contained on the time table is appended to this report. The first 3 days were used for the training of hospital staff made of doctors, nurse/midwives and heath assistants, while the TBAs were trained on the 4th, 7th and 8th days (2nd week). Each batch of trainees consisted of between 10 and 14 participants

The highlights of the activities include:

- Registration and self-introductions;
- Pre- and post-workshop tests for all participants to determine their baseline knowledge on the subject matter and later, the improvement post training;
- Commencement of each day's activities with lectures followed by demonstrations and scenario settings coming as the final activity;
- The end of each day's activities plenary discussion of questions and issues was carried out before closing.
- Closing ceremony and award of certificates and training material (handouts and CD Rom) to the participants as well as basic resuscitation kit to each of the TBAs and Maternity, Labour and Children's units.

Teaching at the skill stations and scenarios were emphasised especially for the TBA groups, with use of instructions in Hausa language.

8.6 Training Outcome

A total number of 35 Gumel Hospital personnel and 37 TBAs were trained. The hospital staff consisted of doctors, nurses/midwives and community health extension workers/ community health officers (the latter work as ward assistants that assist in taking deliveries).

Analysis of the performances of the 35 hospital staff participants that took both the pre- and post-test showed an average of 56.2% pre-test score. Eighty percent had improved on their scores at the end of the training. The average post-test score was 69.6%and participants had an improvement in knowledge about the subject and by average difference of 13.8% between pre- and post-test performances. Three (8.6%) participants did not improve in their scores between the pre- and post-tests while 5 (14.7%) obtained lower scores in the post-test compared to what they obtained in the pre-test. The table in

Appendix 2e shows the summary of marks and average scores and ranges of marks earned by participants.

8.7 Ward Activity

Ward rounds were conducted with the NYSC medical officer on the 4th, 5th and 6th days along with nursing staff in the Children's wards. The team also had a parley with the resident staff after the rounds to discuss and identify constrains/problems, weaknesses and gaps in service provision. These gave opportunity to understand the functionality of the in-patient services by the visiting team.

Management protocols, simplified charts and fluid volume/infusion rate charts were drawn up and provided for posting on strategic locations in the children's ward for quick reference and routine use.

Recommendations were made from observations after a visit to the Hospital kitchen on what to do and how to provide special diet for severely malnourished and sick children as well as offer demonstration for infant and child food preparation for mothers of children admitted.

Recommendations for service improvement were made later on the 4th day at a managerial level meeting of the Paediatric team with the Chief Medical Officer and the Chief Nursing Officer in the presence of the AHDT Coordinator, Dr. Abubakar Zubairu. A similar meeting took place at the close of all activity on the 9th day with the AHDT Chairman Dr. Ibrahim Hassan Jalo and Dr. Ibrahim Dodo and the senior nursing staff heading various hospital units. Further suggestions and recommendations were made on areas of weakness observed.

8.8 Advocacy

A meeting planned with the Jigawa Secretary to the State Government Dr. Aminu Taura could not hold due to challenges with the transport to Dutse, the State capital. The idea was to discuss and agree on ways forward and to consider sustainability of the entire project as well as extending it to other hospitals in Jigawa State at least on a periodic basis.

8.9 Logistic Arrangements

The team of Facilitators made the following observations on logistic arrangements for the workshop:

- Participants mostly reported late at the venue of the workshop on all days. This led to late onset of activities in the mornings and delayed closure of activities till up to 6.00 pm.
- The workshop venue was convenient and conducive for learning.

8.10 Recommendations

At the conclusion of the training, a final meeting of the trainers was held to review the training process and outcome. Our recommendations for improvements in further training workshops of similar nature are as follows:

- The Gumel Emirate Foundation and the Hospital Management should make efforts to organise and support (with funding), follow up evaluation & monitoring on a periodic basis for sustainability.
- The State Ministry of Health should embark on organising similar capacity building project for all its General Hospitals on a periodic basis.
- The GEF and any other influential body or individuals should embark on advocacy to Health Ministry and the State Government to solicit for deployment of more medical officers and staff nurse/midwives to cope with the overwhelming challenges of staff shortage in Gumel General Hospital. Training and re-training of staff working in units where resuscitation and child care takes place is also recommended.

8.11 Acknowledgements

On behalf of the ABUTH NLS Co-ordinator Dr. M.A Bugaje (Head of Department of Paediatrics) and others in the team of NLS facilitators, Dr. Zubaida Farouk, Dr. Lilian Ekwem and Miss Habiba Ahmed (UK), I wish to congratulate the AHDT, the GEF and the management of Gumel General Hospital for a successful conduct of this capacity building exercise.

Dr. Lawal W. Umar
Consultant Paediatrician and Lead Facilitator
ABUTH, Zaria.

9 REPORT ON MATERNITY AND ANTI-NATAL CARE

9.1 Introduction

This report identifies several of the problems encountered with respect to maternity and ante-natal care, and makes some recommendations for future improvements.

9.2 Maternity

The key problems identified include:

- There is inadequate bed space in the labour room and admission room when we arrived. However, there was already some reconstruction and extension of admission and labour rooms in progress and this was completed by the hospital management before our departure.
- The general physical environment was non-clinical with unkempt toilets and dirty wards.
- We found a blocked drainage system in the maternity ward.
- Lighting facilities in the maternity is inadequate. Bulbs are faulty; some of the ceiling fans were not working. There was naked electric wiring all over the unit.
- Hospital power supply was not extended to maternity unit as existing generated power is supplied only to the operating theatre and labour ward.
- The only alternative lighting facility is either the use of kerosine fuel lamp, candle or torch light during child delivering process.
- There was no running tap water when we arrived. Water is collected and stored in plastic containers with a communal collection bowl which leads to contamination. Patients collect water for their use from "tuka-tuka" outside maternity.
- Inadequate adult beds with only 2 beds in the labour room
- 4 new Baby cots seen, 2 with mattresses 2 without. There are also 2 faulty cots
- The unit has 3 water heaters which are not in working condition
- Sterilizers in the unit (Two) were all faulty and in need of repair
- 1 blood pressure apparatus seen
- There were no observation, fluid and treatment charts in use in the unit
- There were no wheel chairs and trolleys for patient transport.
- There is a need for the hospital to procure more drip stands for the unit (Minimum 10 as a starting point)
- The unit needs episiotomy scissors
- No oxygen cylinder apparatus available.

AHDT team's advice/measures taken:

- The entire maternity and labour units were cleaned, washed and painted. The post-natal ward needs some renovation work and we advised this should be undertaken as part of the general infrastructural face lift work going on.
- The blocked drainage system was repaired.

- Power supply from the hospital generator has now been extended to cover the maternity unit from 6pm – 10pm.
    - The hospital management promised to provide a small power generating plant dedicated to provide electricity to the maternity unit and labour room.
    - New light bulbs were installed to replace non functioning ones.
    - Fans in need of repair were repaired and exposed electrical wiring was re-insulated.
- External supplementary water reservoir has now been provided which is providing running tap water. Water is supplied into the supplementary water reservoir from the main water reservoir that serves the hospital.
- Additional 2 adult beds provided by the Gunduma Health systems to the labour room.
- One of the faulty cots was repaired.
- One of the three faulty heaters was repaired, the remaining 2 need to be repaired as promised.
- One of the faulty sterilizers was repaired.
- One additional blood pressure apparatus was supplied.
- Observation charts for the unit have been drawn up. These charts need to be printed and distributed for use as a matter of urgency.
- Wheel chairs & trolleys have not been supplied as at the time of writing this summary.
- The two drip stands in the unit and in need of repair should be repaired.
- Three episiotomy scissors have been supplied. I will suggest 3 more to bring the number to six.
- 1 oxygen cylinder has been supplied without convectors and no training given on its use. These needs should be met (supply of convectors and staff education on how to use oxygen).
- Need for a well equipped ambulance with a driver trained to provide first aid to patients.
- TBAs were educated on infection control procedures.
- Liaised with Dr. Abubakar Zubairu, project coordinator, so that facilities/areas that are in need of some attention are attended to.

Other matters

- The hospital ambulance is dilapidated and not in working condition. The ambulance driver is inexperienced in providing a paramedic service to patients.
- TBA’s lack knowledge of infection control.
- We found a contaminated infusion fluid.

9.3 Antenatal Clinic

Problems identified in the antenatal clinic include:

- There is inadequate accommodation for patient examination. The room available has no lighting.
- No staff toilet, staff share patients’ toilet

- Inadequate space for pregnant women to receive lectures
- Lack of equipment e.g. faulty weighing scales. No glucose monitoring machine.
- Record keeping is poor.

9.4 Labour Room

- No room for patient relatives, they normally sit under the trees.
- New born babies are bathed under the trees compromising temperature control and risking babies becoming cold (hypothermia). A designated area has been made available before I left for bathing of new born babies.
- Some members of staff lack knowledge on principles of blood transfusion and the importance of observation of vital signs. I educated them on the importance of vital signs, disposal of sharps, admission procedures and how to approach a patient with respect and dignity.
- I educated the TBA's on how to attend to home delivery, umbilical cord care and what is expected of them during and after labour.
- In addition, pregnant women were enlightened on the following:
    - Importance of attending antenatal clinic
    - Prevention of HIV infection
    - Anaemia in pregnancy
    - Personal hygiene
    - Signs of eclampsia
    - Signs of normal labour
    - Importance of immunisation, use of medication, risks to maternal health and unknown problems that might arise to the unborn baby with ingestion of traditional medicines.
    - Problems that can arise following female circumcision and also the myths surrounding this practice.
    - The importance of good nutrition in pregnancy.

Mrs. Baraka Abdu
Senior Midwife, United Kingdom

10 APPENDICES

Appendix 1a - Team Members

S/N	Name	Affiliation
1.	Dr. Ibrahim Jalo Hassan	Consultant Microbiologist South Manchester University Hospital, United Kingdom
2.	Dr. Jibril A Jibril	Consultant Surgeon United Lincolnshire NHS Trust Lincoln, United Kingdom
3.	Dr. Abubakar M Zubairu	Consultant Paediatrician Stockport NHS Foundation Trust, UK
4.	Dr. Ibrahim Dodo	Physician Leeds, United Kingdom
5.	Dr. Magaji Sani	Orthopaedic Surgeon Leicester Infirmary, United Kingdom
6.	Mrs. Baraka Abdu	Senior Midwife Bedford, United Kingdom
7.	Miss Habiba Mohammed	Paediatric Staff Nurse London, United Kingdom
8.	Mr. Ibrahim Abdu	Diabetic Specialist Nurse Educator Bedford, United Kingdom
9.	Dr. MS Ado	Consultant Ophthalmologist Abdullahi Wase Specialist Hospital Kano
10.	Dr. Ahmed Ado	Consultant Surgeon ABU Teaching Hospital, Zaria
11.	Dr. MK Shehu	Consultant Ophthalmologist Federal Medical Centre, Gombe
12.	Dr. Mairo Adamu-Bugaje	Consultant Paediatrician ABU Teaching Hospital, Zaria
13.	Dr. Fatima Bello	Consultant Physician ABU Teaching Hospital, Zaria
14.	Dr. Lawal Umar	Consultant Paediatrician ABU Teaching Hospital, Zaria
15.	Dr. Ahmad Mai	Consultant Surgeon ABU Teaching Hospital, Zaria
16.	Dr. L Ekwem	Senior Registrar Paediatrics ABU Teaching Hospital, Zaria
17.	Mr. Nuhu Abubakar Sadiq	Ophthalmic Nurse Abdullahi Wase Specialist Hospital, Kano
18.	Mr. Sanusi Ibrahim	Ophthalmic Nurse Murtala Mohammed Specialist Hospital, Kano
19.	Dr. Bappa Adamu	Consultant Physician Aminu Kano Teaching Hospital, Kano
20.	Dr. Zubaida Farouk	Consultant Paediatrician Aminu Kano Teaching Hospital, Kano

Appendix 1b - Team Composition

Surgical team
TEAM
Dr. Jibril A. Jibril - United Kingdom
Dr. Adamu Ahmed - ABU Teaching Hospital
Dr. Ahmed Mai - ABU Teaching Hospital
Dr. Magaji Sani - United Kingdom
Dr. Abba Habib – Gumel General Hospital
Dr. Aminu Aliyu – Hadejia General Hospital

Ophthalmology teams

TEAM I
Dr. M. S. Ado - Consultant Ophthalmologist
Dr. Danzomo – Aminu Kano Teaching Hospital
Mr. Nuhu Abubakar - Ophthalmic Nurse
Mr. Sanusi Ibrahim - Ophthalmic Nurse

TEAM II
Dr. M. K. Shehu - Consultant Ophthalmologist
Mr. Nuhu Abubakar - Ophthalmic Nurse
Mr. Sanusi Ibrahim - Ophthalmic Nurse

Medical team
Dr. Fatima Bello - Consultant physician/ Endocrinologist, ABUTH Zaria
Dr. Bappa Adamu - Consultant physician/Nephrologist, AKTH Kano
Mr. Ibrahim Abdu - Senior Nurse/Diabetic Educator, Bedford UK

Paediatric team
Dr. Abubakar M. Zubairu – Consultant Paediatrician, Stockport NHS Foundation Trust United Kingdom
Dr. Mairo Adamu-Bugaje – Consultant Paediatrician, ABUTH Zaria
Dr. Lawal Umar - Consultant Paediatrician, ABUTH Zaria
Dr. Zubaida Faruk - Consultant Paediatrician, AKTH Kano
Dr. Lilian Ekwem – Senior Registrar in Paediatrician, ABUTH Zaria
Miss Habiba Mohammed – Paediatric Staff Nurse, United Kingdom

Maternity team
Mrs. Baraka Abdu - Midwife, United Kingdom

Appendix 2a: Training Workshop Programme

AFRICA HEALTH DEVELOPMENT TRUST, GUMEL HEALTH SERVICE IMPROVEMENT PROJECT - NEONATAL LIFE SUPPORT TRAINING WORKSHOP AT GUMEL GENERAL HOSPITAL BY ABUTH-STOCKPORT NHS FOUNDATION TRUST UK WORKSHOP TIMETABLE 15-26 February 2010

8.00-8.30	Registration and Group Allocations
8.30-8.45	Introduction and Opening Remarks
8.45-9.15	Magnitude of the Problem of Neonatal Morbidity and Mortality
9.15-9.45	Pre-test
LECTURES	
9.45- 10.05	Physiological Basis of Newborn Resuscitation
10.05-10.25	Resuscitation at Birth
10.25-10.45	Special Cases
10-45-10-55	Newborn Care
10.55- 11.15	Tea Break
SKILL STATIONS	
11.15-12-15	Airway and Breathing (1 Group)
12.15-12.45	Insertion of Umbilical Venous Catheters (1 Group)
12.45-1.15	External Cardiac Massage and Equipment (1Group)
12.15-1.15	Rotation of Groups through Skill Stations
1.15-2.15	Lunch Break
2.15 –3.45	SCENARIOS (In 3 Groups)
3.45 - 4.00	Break
4.00- 5.00	Post-Test and Question and Answer Session.
5.00	Closing

Appendix 2b: List of Trainers

S/n	Name	Specialty	Address	Email Address
1	Dr. M. A. Bugaje	Consultant Paediatrician & HOD Paediatrics ABUTH	Ahmadu Bello University Teaching Hospital, Zaria	mairobug@yahoo.co.uk
2	Dr. L. W. Umar	Consultant Paediatrician & Lead Facilitator	Ahmadu Bello University Teaching Hospital, Zaria	umarlw@yahoo.com
3	Dr. Zubaida L. Farouk	Consultant Paediatrician	Aminu Kano Teaching Hospital, Kano	faroukzubaida@yahoo.com
4	Dr. Lilian Ekwem	Senior Registrar Paediatrics	Ahmadu Bello University Teaching Hospital, Zaria	ezelili@yahoo.com
	Miss Habiba A. Mohammed	Paediatric Staff Nurse	UK	bibaah@aol.com

Appendix 2c: Attendance Register for TBAs trained for Newborn Resuscitation at Gumel General Hospital (15-27 February 2010)

No.	Names	Sex	Designation	Department	Unit	Phone & E-mail
1	Nana Nasiru	F	TBA			
2	Talatuwa Mohammed	F	TBA			
3	Gadada Muhd	F	TBA			
4	Halima Inusa Maikoko	F	TBA			
5	Hinjira Haruna Maikoko	F	TBA			
6	Zara Gambo Musa	F	TBA			
7	Uwani Haruna	F	TBA			
8	Hajiya Safiyanu	F	TBA			
9	Talatu Shuaibu	F	TBA			
10	Mairo Yinya	F	TBA			
11	Uwani Sabo	F	TBA			
12	Zainab Abubakar	F	TBA			
13	Hajara Ya'u Dogo	F	TBA			
14	Zilai Audu	F	TBA			
15	Jimmai Yahaya	F	TBA			
16	Saratu Ibrahim	F	TBA			
17	Barai Umaru	F	TBA			
18	Laraba Hashimu	F	TBA			
19	Hajja Cincina Ayagi	F	TBA			
20	Hauwa Habu	F	TBA			
21	Adil Barka	F	TBA			
22	Hauwa Haruna	F	TBA			
23	Aisha Atuwa	F	TBA			
24	Maryam Yakubu	F	TBA			
25	Khadija Abdullahi	F	TBA			
26	Memu Nakere	F	TBA			

27	Saude Ilu	F	TBA			
28	Gallo Inusa	F	TBA			
29	Ballki Amadidi	F	TBA			
30	Hadiza Dahiru	F	TBA			
31	Balki Alkasin	F	TBA			
32	Ramatu Yakubu	F	TBA			
33	Harisa Abubakar	F	TBA			
34	Indo Sule	F	TBA			
35	Fatsima Ibrahim	F	TBA			
36	Laure Idris	F	TBA			
37	Rabi Usaini	F	TBA			

Appendix 2d: Attendance Register for Neonatal Resuscitation Workshop for Gumel General Hospital Staff (15-27 February 2010)

No.	Name	Sex	Designation	Department	Phone & E-mail
1	Juma Musa Musa	F		Maternity	
2	Maryam Aliyu	F		Paediatric ward	
3	Aishatu Mohammed Gumel	F	Unit Head	ANC	
4	Dr. Babalola Adubina	M	Medical officer		adubinab@yahoo.com
5	Hauwa Ahmad	F	Unit Head	Paediatric ward	
6	Rabi Tijjani (Yalwa)	F		Maternity	
7	Dije Ibrahim	F		Maternity	
8	Veronica Enozie	F		Maternity	
9	Hadiza Habu	F		Maternity	
10	Yahaya Iliyasu	M		Paediatric ward	yahayiliyas@yahoo.com
11	Zainab Yahaya	F		Paediatric ward	
12	Ladi Ibrahim Nom	F		Maternity	
13	Mutari Abdulhamid	M		Paediatric ward	
14	Aishatu Ibrahim	F		Paediatric ward	
15	Hassana Sanusi	F		Paediatric ward	
16	Aishat Idris	F		ANC	
17	Sadiya Mohammed	F		Paediatric ward	
18	Rosaline Uwaga	F		Maternity	
19	Azumi Aminu	F		Maternity	
20	Dr. O. James	M			
21	Dr. Chika Onoh	F			
22	Dr. O. Pamela	F		Paediatric ward	
23	Fatima Mohammed	F		Maternity	
24	Habiba Umar	F		ANC	
25	Hadiza Ibrahim	F		Maternity	
26	Abu Yusuf	F		ANC	
27	Rabi Adamu	F		Maternity	

28	Aishatu Umar	F		Maternity	
29	Talatu Magaji	F		Paediatric ward	
30	Hauwa Aliyu	F		Paediatric ward	
31	Rabi Abdulkadir	F		Paediatric ward	
32	Aishatu Yahaya	F		Paediatric ward	
33	Maryam Adamu	F		Maternity	
34	Dr. Abdullahi Habib	M	Chief Medical Officer	Maternity	abbahabib@70.gmail
35	Bilki Baso	F		Maternity	

Appendix 2e: Comparison of Mean Scores and Range of Marks in the Pre- and Post-tests

Parameter	Pre-Test %	Post-Test %
Mean Score	56.2	69.6
Lowest Mark	17.5	40
Highest Mark	72.5	82.5

Appendix 3: Provisional Statement of Project Expenditure

UK Expenditure

Airline Tickets:	8 x 600	£4,800.00	
Consumables:	Hernia Mesh	£337.81	
	Drugs	£1850.00	
	Excess Luggage @ BA	£104.00	
	Manikin/Ambou Bags	£788.78	
			£7880.59

Gumel Logistics

Hospital Consumables:	N270,000.00	
Stationary:	N5550.00	
Staff Costs:	N28,500.00	
Gumel Foundation (Feeding and Diesel):	N50,000.00	13/02/10
	N200,000.00	15/02/10
	N100,000.00	18/02/10
	N100,000.00	23/02/10
Diesel for Gumel Gen Hosp:	N40,000.00	15/02/10
	N28,000.00	18/02/10
	N27,000.00	22/02/10
	N27,000.00	24/02/10
Deposit for Account Opening:	N50,000.00	
	N926,050.00	

Funding for Zaria/Kano Local Project Team

4 x 215,000	N860,000.00
1 x 175,000	N175,000.00
2 x 170,000	N340,000.00
1 x 165,000	N165,000.00
2 x 90,000	N180,000.00
1 x 110,000	N110,000.00
1 x 75,000	N75,000.00
	N1,905,000.00

AHDT Merit Award for Gumel Staff

3 x 35,000	N105,000.00
1 x 25,000	N25,000.00
1x 20,000	N20,000.00
7x 10,000	N70,000.00
5 x 2,000	N10,000.00
1 x 1,000	N1,000.00
	N231,000.00
	N3,062,050.00

Appendix 4 – Pictures from the Project

Picture 1: Banner advertising the project at the hospital's entrance

Picture 2: Team members performing surgery

Picture 3: Overhead booster tank structure erected on team's advice

Picture 4: Cross-section of female patients waiting to be attended to

Picture 5: Team members performing surgery

Picture 6: Cross-section of male patients waiting to be attended to

Picture 7: Some male eye surgery patients post-op

Picture 8: Some female eye surgery patients post-op

Picture 9: Team members being presented with certificates of participation by the Emir of Gumel, HRH Alhaji Mohammed Ahmed

Picture 10: Medical supplies brought along by the team