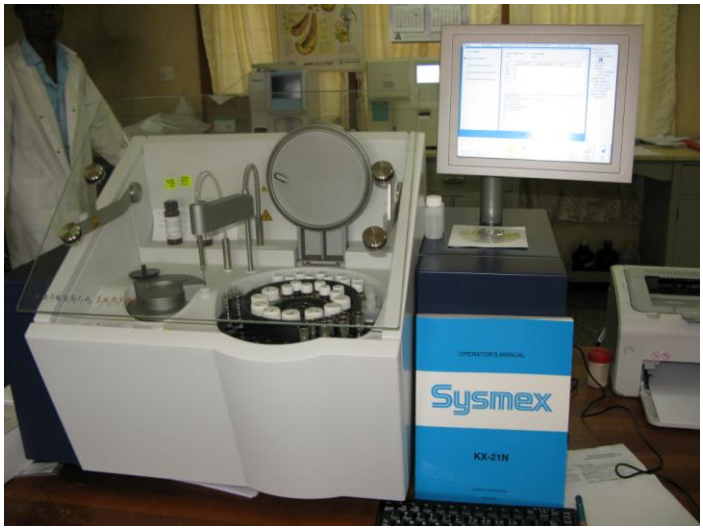
June 12th – 28th 2009 Trip Report

Raymond Ofori, Chief Biomedical Scientist.

Week 1: All travelling Moteclife members met at LaPalm Beach Hotel and had lunch at the African village before joining the appropriate vehicle for our respective destinations. Three members led by trip leader Dr Christine Amakye, Anaesthetist, Mr Ofori-Atta, Orthopaedic Surgeon, and Mr Ray Ofori; Microbiologist arrived at Akosombo Volta River Authority (VRA) Hospital on Sunday 14th June. The team got straight to work after a brief rest, attending orthopaedic teaching ward rounds to assess patients admitted for various surgeries during the week. VRA is well appointed 70 bedded hospitals in the Volta Region, was set up originally to service the Volta River Authority staff but now attracts patients from all over the Volta region and beyond.

Each morning started with an orthopaedic ward rounds. I attended with Mr Ofori-Atta and Dr Christine Amakye and joined them, with the local doctors medical students and rotational registrars in theatre as an observer for major operations.

Laboratory visit: I spent some time in the Laboratory discussion various clinical investigations they are capable of performing. Although previously well equipped, much of the equipment was well past its sell by date, and was not very efficient to use. Various replacement options were discussed. The lab is well organised and the department offers haematology, clinical chemistry and blood transfusion services. The laboratory is equipped with Portable Sysmex - KX21 - N Haematology analyser and a semi-automate Biochemistry analyser (see picture below). Haematological tests offered include haemoglobin and indices, differential count, and ESR. For chemistry, blood glucose, creatinine total protein and bilirubin, liver function and kidney function tests are measured. There is a large amount of microscopy work involving the examination of slides for malaria, sputum for tuberculosis diagnosis and stools and urine for ova, cysts and parasites. As with most of the laboratories I have visited in Ghana, microscopic slides are washed and reused until they are so scratched they cannot be used anymore. A major concern which Moteclife would need the assistance of donors to help address. Microbiological cultures of clinical specimens were performed on a very small scale. This lack of microbial investigation and susceptibility testing made it difficult to assess at first hand the prevailing bacteria causing various infections both within the community and in the hospital. Knowledge about resistance could not be accessed.



Semi-automated chemistry analysis

Lectures: A series of lectures were given on a daily basis by the team, which was well received. These were presented to approximately 40 Hospital staff including Doctors, Paramedics, Medical Students & nursing staff. Some of the lectures were given by other members of the team while I was away fulfilling other assignments at Nkawkaw.

Topics included:

Infectious diseases 21st century challenges – Ray Ofori

Post-operative pain relief – Dr Amakye

Post-operative Care – Dr Amakye

Sickle Cell Bone and Joint Disease – case report on arthroplasty on SS Disease – Dr Amakye.

Cervical Spine Injuries by P. Ofori-Atta

I left Akosombo VRA hospital on the afternoon of 16th June to join the Nkawkaw team after a tour at the hydroelectric dam (arranged for me by the hospital medical superintendant).

Holy Family Hospital Nkawkaw:

I joined the Motec Surgical Team based at Nkawkaw Holy Family Hospital led by Mr Michael Burke, Consultant General Surgeon, and supported by Dr Thungo Kuwani, Consultant Anaesthetist, Northwick Park Hospital and Mrs Felicity Adu-Mills - Palliative Care Nurse, St Luke's Hospital, on the evening of 16th June.

The group performed various surgical procedures, supported laboratory and community health work. At the end of each working day, lectures were delivered by the group (one hour per day) at the Nurses Training School between 16.00 –17.30 hours every evening. Attendances at the lectures were good with the hall most often full. Each lecture slides were downloaded on the schools computer for reprints of handouts to be left in their library for reference.

Lecture: Topics included

Post-operative Care

Post-operative Pain Control

Patient Recovery
Microbial Infection – the 21st Century Challenges
Breast is Health and Disease
The Thyroid Gland in Health and Disease
Post-partum Haemorrhage
The Expert Patient
Bacterial Vaginosis

Week 2: St Joseph's Hospital, Jirapa:

Following a successful evaluation visit last year by 2 motec members (see report by Dadzie, I.A; Derbie, S.S; Ofori-Atta, P. (December 2008). A Global Opportunity In The North Of Ghana – www.moteclife.co.uk), Motec sent Dr Christine Amakye (Trip Leader), Felicity Adu-Mills (palliative nurse) and Ray Ofori, on a five day educational visit. The journey from Kumasi, Ghana's 2nd largest city took about 8 hours.

The team embarked on an intensive teaching programme at the Nurses, midwifery and community colleges. Three lectures were given each day (see table). Lectures were well attended by both students and tutors. Lectures were interactive and the rooms were fully packed with an average attendance of over 200 students. Lecture on STI was very popular and the speaker had to answering a host of questions. After the close of lectures, a few students followed the speaker for more question and answer sections. The team stayed for four nights in that hospital. The hospital and people of Jirapa were very appreciative of Motec's working visit.

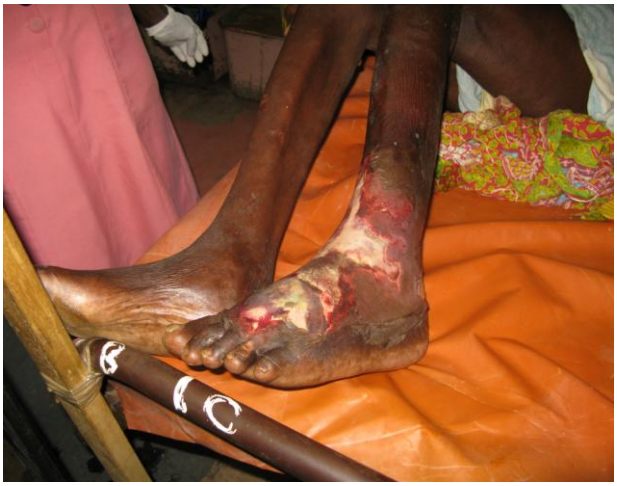
Lecture schedule:

Date	Topic	Presenter
22nd June	1. Post-partum Haemorrhage 2.Post-operative Pain Control 3. Community Health	Mrs Adu-Mills Dr Amakye Mrs Adu-Mills
23rd June	1.Sickle Cell Bone and Joint Disease – case report on arthroplasty on SS 2.The Expert Patient 3. Post Operative Care	Dr Amakye Mrs Adu-Mills Dr Amakye

24th June	1.Microbial Infection – the 21st Century Challenges 2.Tuberculosis 3. Sexually Transmitted Diseases	Mr Ofori Mr Ofori Mr Ofori

Laboratory: Similar to Akosombo Hospital, much of the equipment was well past its sell by date, and was not very efficient to use. Various replacement options were discussed. The lab is equipped to perform basic haematological and biochemistry analysis to support clinical work in the hospital. These include full blood count, malaria smears, liver, and kidney function tests, stool examination for parasites, and sputum smears for TB diagnosis and blood transfusion services. Microbiological cultures of clinical specimens are performed on a very small scale (just about 2 or 3 per day. This lack of microbial investigation and susceptibility testing made it difficult to assess at first hand the prevailing bacteria causing various infections both within the community and in the hospital. Knowledge about resistance could not be accessed.

I joined Dr Amakye, Felicity and 2 Cuban volunteer doctors on ward rounds. Though the wards are generally run down and in need of urgent refurbishment or possibly re-bult, were generally very clean. A patient with left foot ulcer on his lower leg was found on the ward (see picture below). A typical case where microbiological culture of the wound have been an advantage to the clinician and patient in terms of appropriate antimicrobial therapy. The group left Jirapa hospital on Thursday 25th June after a meeting with the hospital management.



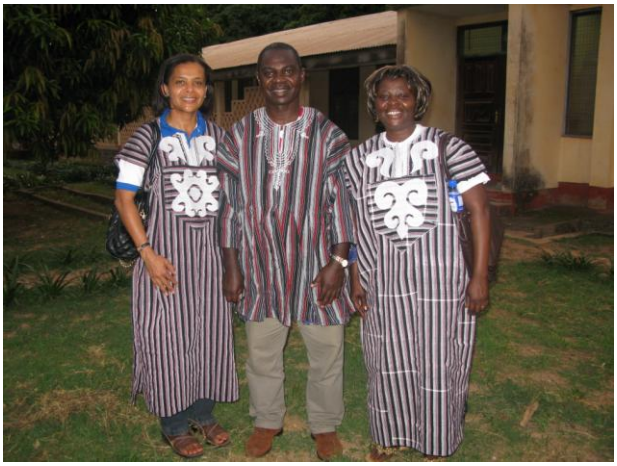
Left foot ulcer

Susceptibility Testing and Surveillance

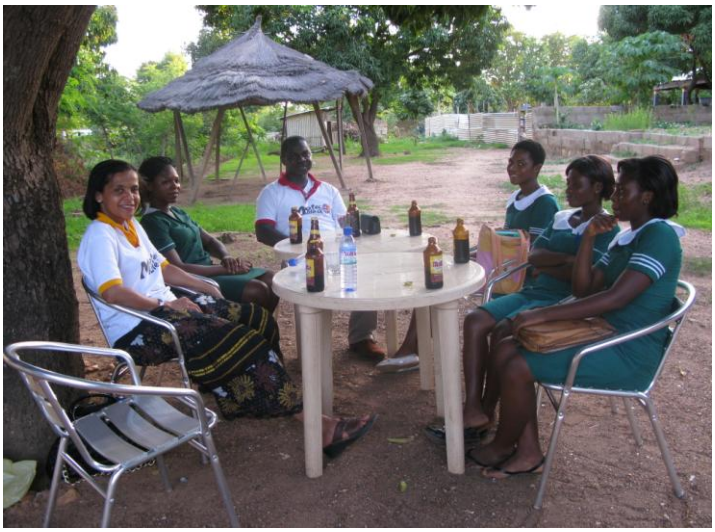
Information from routine susceptibility testing of bacterial isolates and surveillance of antibiotic resistance, which provides information on resistance trends, including emerging

antibiotic resistance, is essential for clinical practice and for rational policies against antibiotic resistance. In most of the hospitals I have visited in Ghana, bacterial infections are often treated after they become life-threatening, which encourages empirical selection of broad-spectrum antibiotics. The antibiotic susceptibility pattern of bacterial isolates in much of Ghana is unknown. Susceptibility testing cannot be done readily because equipment, personnel, and consumables are scarce and expensive. In most all infections, no clinical specimens are cultured. Where available, community-based antibiotic surveillance data may be useful to prescribers in the absence of patient-specific antibiotic-susceptibility results.

National surveillance programs for antibiotic resistance, the norm in industrialized nations, are less common and less elaborate in the hospitals I have visited. Current inferences about antibiotic resistance trends in Ghana are based on a small number of reports, generated by a handful of microbiology laboratories in urban areas—data not representative of a country, because wide variations in antibiotic resistance patterns may exist within countries. Moreover, surveillance should be conducted regularly and continuously because resistance rates can vary in one region of a country over time.



Gift of smock presented to motec members.



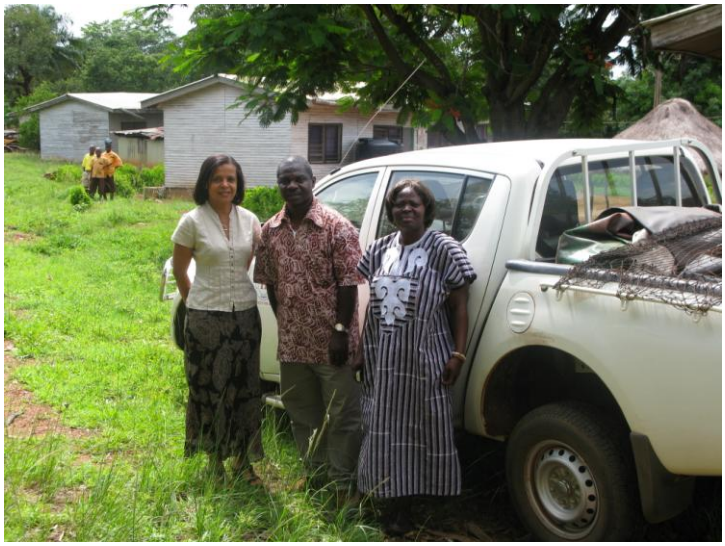
Relaxing under a mango tree with friends of Motec

Recommendations:

1. The laboratories need a biological safety cabinet to be used for the processing of samples from the lower respiratory tract. This will prevent lab staff exposing themselves to open TB sputum on the bench.
2. The laboratories could benefit from a bacteriological incubator to assist them to expand their culture facilities.
3. Bacteriological slides, which are currently washed and re-use could be stopped if large and regular supply of slides could be sourced and provided.
4. Regular supply of antibiotic discs, reagents and media powder
5. Good microscopes for microscopic work
6. There is the need to write standard operation procedures (SOP) for all the procedures used for performing of tests so that everyone could follow the same method.

Acknowledgements

Special thanks to Mr John Mitchell of the Order of St John of God who sponsored my trip and Mr and Mrs Acheampong, Noda Hotel, Kumasi who provided the team with packed lunch for our journey to Jirapa and also lunch at their hotel on our return journey. Thanks also to the management and staff at Jirapa Hospital for their hospitality and gifts.



Dr Amakye traces childhood village with Ray & Felicity at BUI dam camp built for the staff who were supposed to build the original Bui dam 40 years ago.