

# **REPORT ON APFP EAST AFRICA SITE VISIT (Kampala, Uganda & Nairobi, Kenya) APRIL 2013**

**MONDAY APRIL 15<sup>th</sup> 2013: Makerere University / Mulago Hospital complex,  
Kampala, Uganda**

Alan Davidson (AD) spoke to the Makerere University's Department of Paediatrics. The talk, entitled "Paediatric Cancer and Blood for the General Paediatrician," was attended by a large number of registrars and medical officers. They were very engaged and asked some really searching questions.

James Nuttall (JN) and AD met with Prof Sarah Kiguli (SK), Head of Paediatrics at Makerere University, as well as Drs Joyce Balagadde-Kambugu (JB) (Paediatric Oncology) and Nicolette Barungi (NB) (Paediatric Infectious Diseases). The discussions centered around identifying appropriate candidates for the APFP training programme. Ideally, the candidate must be able to define his or her training needs at the outset, and this is easiest if they are chosen by and already work at the referring site/unit. SK pointed out that "outsiders" (doctors in the private sector or working in the regions) may add value. All agreed that, in the case of Uganda, paediatricians at Makerere were ideally placed to identify candidates, and SK articulated some disquiet that some trainees had come for training through other channels. SK agreed to take forward a suggestion that she form a committee to handle applications which would include representatives from the Uganda Paediatric Association, nursing and paediatric surgery. Their brief would be [1] Vetting applications [2] Needs assessment and strategic planning. The meeting was held in a very positive spirit in anticipation of future Ugandan involvement in the APFP.

AD attended a clinic at the Uganda Cancer Institute (UCI), was shown a number of complicated cases and had the opportunity to discuss some of the graduated intensity treatment protocols developed by JB. AD then met with JB and the head of UCI, Dr Jackson Orem (JO), to discuss further training opportunities. It is hoped that JB will return in due course for a second year of training at the Red Cross Children's Hospital (RCCH) and sit her certificate exam, perhaps preceded by another paediatrician from the UCI thus creating a string team at UCI. There was also discussion about training for nurses. AD is looking for funding for short term attachments (which in future will take place when the doctors are training at RCCH) giving paediatric nurses some oncological insights and developing a team approach. Long term attachments have the advantage of fostering personal development and leadership, and building training capacity at the referring centre. They would need to be arranged via the APFP nursing programme, and currently do require the nurses to be fully trained paediatric nurses in order to sub-specialise. This is something AD promised to take up with Professor Minette Coetzee. Applications will, of course need to go via SK's committee.

AD attended a meeting with the staff of the UCI. The Director of Clinical Services provided some insights and then AD gave a talk entitled "Getting The Best Out of Your Oncologist."

In existence since 1967, the UCI is the national referral center for all cancers in Uganda. Initially established to conduct research into endemic Burkitt lymphoma in Ugandan children, the Institute has since evolved to offer care to both adults and children. As one of the key strategies is to improve the quality of clinical care rendered to children with cancer, the leadership of the UCI encouraged and supported JB (then the only paediatrician at UCI) to train at RCCH. Upon her return in 2012, a dedicated paediatric oncology service was established. At the heart of the service is a multidisciplinary paediatric oncology team led by the paediatric oncologist and comprising a paediatrician, 2 medical officers, 6 nurses, a counselor, a physiotherapist and a social worker.

One third of the patients receiving treatment at UCI are under 18 years of age and the paediatric service attended to 390 children under the age of 15 years in 2012, with patients coming from as far afield as South Sudan, the Democratic Republic of Congo, Tanzania, Rwanda and Burundi. Uganda sees about 2000 cases of cancer for every 1 million people; 5% of them are children which equates to about 100/million. What was interesting is that the radiation oncology department is not part of the UCI, but communication has been facilitated by the very dynamic paediatric Tumour Board. The UCI has access to basic labs, some pathology, an XRay machine and an ultrasound machine. Much of the pathology, as well as any scans need to be funded by the parents. There is a pretty reliable supply of cytotoxics and supportive care drugs, but second line antibiotics have had to be funded through research projects. Blood products are available but have to be used sparingly and such is the success with their use that AD suggested that they publish their experience.

A most exciting development is that a new multi-story institute is being constructed at the top of Mulago Hill and this will be followed by the construction, in an adjacent site, of a new radiation oncology department with new treatment facilities. This will improve the services available to children and further encourage multidisciplinary management. JB was good enough to provide a comprehensive document which is bundled with this report.

JN was escorted by NB on a tour through the Mulago Hospital complex focusing on the Baylor Uganda HIV clinic and the General Paediatric wards. NB functions as a general paediatrician with interest and experience in ID including HIV although it was apparent that ID as a functional clinical service and sub-specialty is still under development. She works both in Baylor clinic and the General Paediatric wards where she provides clinical supervision and training to junior medical staff and paediatric registrars. There is a very striking contrast between the Baylor clinic and wards. Baylor clinic is a beautifully designed and maintained privately-funded, stand-alone, model out-patient facility for HIV-infected children and adolescents and their families within the grounds of Mulago Hospital. It is well-staffed and not overcrowded as highly efficient computerised patient management and administrative systems including electronic clinical records and prescribing enables large numbers of patients to be processed every day. We visited and had brief discussions with some of the medical and nursing staff as well as the pharmacy and nutrition departments within Baylor Clinic. It was notable that a number of antiretroviral (ARV) combination medications and nutritional supplements that are not available in South Africa were in use at Baylor clinic. Throughout the clinic, there is very good attention to infection prevention and control including excellent use of natural ventilation. There are also good staff facilities including a canteen and meeting spaces. Various forms of stimulation and entertainment are provided for the patients.

Following the tour of Baylor clinic, JN attended a ward round with NB focusing on selected ID problems in the General Paediatric wards. We discussed a child with disseminated TB, a child with rheumatic heart disease, and an HIV-infected infant with pneumonia. In contrast to Baylor clinic, the paediatric wards are much older and in need of maintenance, repair and expansion. There is significant overcrowding of patients and their families which makes infection prevention and control measures extremely challenging. Monitoring and supportive care relies on parental involvement and nursing support appears to be limited and under great pressure. As an example, oxygen provision in each section of the ward is limited to ten or more long tubes each leading to a different patient all emanating from a single oxygen point. There is no provision for intermediate ventilatory support in the form of high-flow oxygen or CPAP in the wards or in the high-care section of the admissions unit that we visited. We did not visit the ICU which is apparently a combined paediatric and adult facility some distance away from the paediatric wards. Despite these challenges, the junior medical staff (registrars and interns) appeared to be energetic, engaged and conscientious. Children identified as being HIV-infected during admission, have the opportunity of referral for out-patient follow-up and initiation of antiretroviral therapy at Baylor clinic.

JN also reacquainted with Dr Ombeva Oliver Malande, a Kenyan who is currently working in Uganda as a paediatrician at a private hospital (Paragon Hospital, Kampala) but who maintains academic links with Makerere University and whose application to the APFP for an ID fellowship at RCCH in 2014/15 is currently in process.

### **TUESDAY APRIL 16th 2013: Makerere University / Mulago Hospital complex, Kampala, Uganda**

JN gave a talk to the Department of Paediatrics at Makerere University. The talk was titled "Drug resistance in paediatric infectious diseases" and was well-attended by registrars, medical officers and paediatricians working at Mulago Hospital. The focus of the talk was antimicrobial stewardship and drug-resistant tuberculosis and the topic gave rise to considerable interest and a number of questions.

AD attended a very lively Tumour Board at the UCI, and then walked around the Mulago hospital complex visiting the departments with whom the oncologists at UCI work. The paediatric surgeons run a very busy service, as do the radiation oncologists, who treat 1800 patients per year in 5 daily shifts, the last of which starts in the early hours of the morning. They also treat some patients on Saturdays to get through all the work.

JN attended an adolescent HIV clinic at Baylor with NB. A number of useful discussions with clinicians regarding new ARV drugs, access to viral load monitoring, ARV drug resistance testing and third-line ARV treatment regimens took place. JN also had a lively meeting with Professor Philippa Musoke who is head of Infectious Diseases at Makerere University / Mulago Hospital and NB. Prof Musoke is based at the Makerere University Johns Hopkins University (MUJHU) clinical research center situated within the Mulago hospital complex. She is involved in several international collaborations including the International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) group but also manages to do regular teaching ward rounds at Mulago. She described a number of familiar challenges in

developing ID as a clinical service and sub-specialty in the hospital faced with the huge burden of infectious diseases carried by the under-resourced general paediatric wards. We discussed ID training opportunities at RCCH/UCT through the APFP and she encouraged NB to try to complete her ID training, in particular the research component, if possible.

Prof Musoke, NB, and Dr Sabrina Bakeera-Kitaka, paediatrician and senior lecturer at Makerere University (as well as immediate past president of the Uganda Paediatrics Association) who was away in the USA during our visit make-up the Paediatric Infectious Diseases service at Makerere University / Mulago Hospital. Overall, there is a lot of support for the further development of Paediatric ID at Makerere / Mulago although these individuals are under considerable pressure from existing research, teaching and general paediatric responsibilities.

### **WEDNESDAY APRIL 17<sup>th</sup> 2013: Aga Khan Hospital / Aga Khan University and Kenyatta National Hospital / University of Nairobi, Nairobi, Kenya**

AD and JN had a meeting with Dr Pauline Samia at the Aga Khan Hospital. This privately funded university-based institution incorporates a range of paediatric specialists and sub-specialists and provides post-graduate (although currently not sub-specialist) training (currently, there are a number of interns and 11 paediatric registrars). The Aga Khan University will launch a medical undergraduate training programme in 2016. Dr Samia mentioned that Professor Rodney Adam based at Aga Khan Hospital had an interest in ID and training together with Dr Wahu Gitakah but we were unfortunately unable to meet with them to discuss this further. The department of paediatrics is fully fledged with a casualty unit, intake and general wards, sub-specialty beds, as well as a NICU and a PICU (the latter shared with adults). Two nurses showed interest in undertaking advanced NICU training in the UCT complex. Across the road from the AKH is the Gertrude Children's Hospital. A private hospital for children only they do not train students but will accept registrars for some attachments.

This was followed by a meeting at the Kenyatta National Hospital (KNH) with Dr Jamilla Rajab, a consultant in the Haematology Department of the University of Nairobi (UoN) which runs the clinical service for paediatric haematology-oncology at KNH (in the absence of a paediatric oncologist). Dr Muthoni Mburu also attended the meeting. A young graduate of the UoN paediatric programme, she works in the private sector at Karen Hospital but spends one day a week in haematology-oncology at KNH. Both the Haematologists and the Paediatricians (Prof Lisa Obimbo is HoD Paediatrics at KNH) are keen for Dr Mburu to undergo sub-specialist training in Paediatric Oncology at RCCH and there are unfilled posts at KNH, but unfortunately there is no guarantee that she will be appointed on her return.

The KNH has a busy Paediatric Oncology service with a ward for about 30 complicated patients, as well as about another 30 cases in each of the four General Paediatric wards. KNH is one of two referral centres in Kenya, the other being the Hospital at Eldoret which is affiliated to Moi University. The four General wards each accommodate 100-150 patients, and each one is staffed by 7 residents and 5 consultants. They are overcrowded but quite well-equipped with individual oxygen points. Strikingly, registrars are not paid a salary and must undertake private work out of hours to subsist. Other than the tour through the

general paediatric wards, JN was not able to meet with other relevant staff at KNH to discuss ID-related issues as most had left Nairobi to attend the Kenyan Paediatric Association annual meeting which was already underway in Mombasa.

### **THURSDAY APRIL 18<sup>th</sup> and FRIDAY APRIL 19<sup>th</sup> 2013: Kenya Paediatric Association 14<sup>th</sup> Annual Scientific Conference, Mombasa, Kenya**

AD and JN attended the proceedings of the Kenya Paediatric Association's (KPA) annual scientific conference, using the opportunity to discuss the programme with interested candidates and supervisors, to touch base with graduates and to discuss the way forward in Kenya with executive members of the KPA.

Dr Polycarp Mandi presented a RCCH study of auto immune hepatitis. He is an APFP-trained paediatric gastroenterologist who works in western Kenya, and is affiliated to Moi University. There was also a very good talk on managing blood transfusions in children of Jehovah's witness.

AD and JN met with KPA president, Dr David Githanga, as well as KNH paediatric HoD, Professor Lisa Obimbo, and KPA executive member, Dr Pauline Samia. The KPA have accepted in principle the role of stewardship for APFP applications from Kenya. Having received a letter of request to that effect from the APFP, the Exco is set to meet to ratify the criteria proposed by Professor Jo Wilmshurst which are set out here.

Suggested guidelines for APFP applicants nominated by local committees.

1. Fellows must be nominated by Heads of Paediatric Departments of Academic Tertiary Institutions in their own countries.
2. Nominating departments must certify that their nominees will be given appropriate leave of absence for training purposes.
3. Nominating departments must certify that their nominees will be returning to their countries after training, and that they will return to positions relevant to the training that they have received.
4. Only doctors who have a registered postgraduate qualification (or appropriate experience) in paediatric disciplines are eligible.
5. All nominees must be sufficiently proficient in the English language.
6. All nominees must submit in due time, all the necessary documentations (which the APFP admin office will request), and to fulfill all the requirement that lead to being registered as a training registrar of the Department of Paediatrics and Child Health of the University of Cape Town.

Committees should have broad representivity both in terms of regions (including paediatricians from the various academic units in each country) and professions (preferably including nurses and ancillary workers). Committees are encouraged to identify candidates based on a needs analysis that identifies disease priorities and regional deficiencies.

During the meeting it was pointed out that there is also a possibility of working with the Eastern African Paediatric Association. This representative structure chaired by Professor Fred Were (the immediate past president of KPA) was founded with the intention of helping to foster paediatric expertise in other countries in the region.

A lively discussion followed comparing the pros and cons of a one year Diploma versus a two year Certificate. The consensus was that it would be good to have both options. Some mature trainees who already work in the field may be very well-served by a one year attachment while others who are starting out their careers would be happy to pursue a two year certificate. Kenya is going to regularize standards for training via the nascent College of Paediatricians. They almost certainly will recognize a one year certified attachment as sufficient for sub-specialty registration (on condition that the graduate works for a further year in a teaching institution in Kenya). What was emphasized again is the importance of shaping the training to fit the requirements of the context to which the trainee is going to return.

We subsequently met with the HoD of paediatrics at Moi University in Eldoret who also sits on the KPA executive. He is keen to send trainees and happy that KPA will act as a clearing house to vet applicants.

JN was the key note speaker on Friday the 19<sup>th</sup> delivering a very well received lecture on “The role of the Paediatric ID Specialist in a Developing Country.” He also introduced the APFP to the audience, giving a thorough overview and referring to [1] the various training opportunities and [2] ease of access via the website. AD gave talks on “Diagnosing Leukaemia and Lymphoma” and “Managing Sickle Cell Anaemia”. During the afternoon there were a number of interesting ID and haematology-oncology related talks including presentations by Dr Jessie Githanga (KNH and UoN Haematology) of the results of the INCTR-sponsored Burkitt Lymphoma protocol and Dr Samuel Rutare, a Rwandan who is currently a paediatric registrar at KNH/UoN and interested in ID sub-specialisation, on “Prevalence of methicillin resistant staphylococcus aureus (MRSA) among paediatric patients admitted in ICU and NICU at Kenyatta National Hospital, Nairobi, Kenya” .

Several people approached JN and AD to ask about training, including Dr Rebecca Chancey from Duke University who helps to run the paediatric programme in Kigali, Rwanda and was keen to explore sub-specialty training for their graduates. Dr Mugo, a pulmonologist from Gertrude Hospital spoke about how he had benefited from an attachment at RCCH many years ago, and reflected on how much RCCH and UCT have contributed to paediatric practice in other parts of Africa.

### **FEEDBACK FROM TRAINEES**

1. Joyce Balagadde-Kambugu (Oncology) – Heads Paediatric Oncology at UCI.
2. Nicollete Barungi (ID) – Works in ID at Mulago Hospital and Baylor Uganda.
3. Proscovia Mugaba (Cardio) – looks after children with cardiac problems in General Paediatrics at Mulago Hospital.
4. Pauline Samia (Neurology) – Neurologist on the faculty of AKU; Manages registrars.
5. Leah Githinji (Pulmonology) – Working in a regional hospital in Eastern Kenya and doing some private work; keen to get back to KNH.

6. Lisa Obimbo (Pulmonology) – HoD of Paediatrics at KNH.
7. Polycarp Mandi (GIT) – Working in Western Kenya – hoping to get a position at Moi University in Eldoret.
8. Francis Ogaru (Pulmonology) – Working at Moi University (Eldoret).
9. Hamid Twahir (Renal) – Working at Gertrude Children’s Hospital in Nairobi.

**NEW & POTENTIAL APPLICANTS**

Geriga Fadhil	Uganda	Oncology
Wahu Gitakah	Kenya	ID
Caren Mburu	Kenya	ID
Muthoni Mburu	Kenya	Oncology
Christine Muasya	Kenya	ID
Sarah Muma	Kenya	Oncology (coming to East London in Sept 2013)
Jacquie Oliwa	Kenya	ID
Samuel Rutare	Rwanda	ID
John Wachira	Kenya	Pulmonology