THE UNIVERSITY OF TORONTO

AMPATH-RH newsletter

Winter 2015 ~ Issue 1

Message from the Director of AMPATH-University of Toronto and Vice-Chair of Global Health and Advocacy

Welcome to our first edition of the AMPATH-Reproductive Health (AMPTH-RH) newsletter, an update on the extraordinary contributions that our department and university are making alongside our Kenyan Moi University School of Medicine and Moi Teaching and Referral Hospital colleagues and our North American AMPATH colleagues to better the lives and reproductive outcomes of women in Western Kenya. We have been involved in AMPATH since 2007, and moving forward we hope to use this format to update you periodically on our progress. My sincere thanks go to all those who support our work and contribute to it day in and day out, especially my colleagues on the ground in Eldoret representing the University of Toronto, our Field Director, Astrid Christoffersen-Deb and RH Team Leader, Heather Millar. My many thanks as well to those who have taken the time to write for this issue and to all of you who are taking the time to read about our work.

Looking forward, we are sure that 2016 will be another year of growth in our program with new opportunities, and clinical programs on the horizon. To name but one, we look forward to the launch of the Moi clinical fellowship in Maternal Fetal Medicine in September, 2016.

In the way of AMPATH, we forge ahead with a tripartite mission of clinical care, research and education, always "leading with care" on the ground. We wish you all the very best of the holiday season and health and happiness to you and yours in 2016.

As 2015 comes to an end, please consider supporting the work that the University of Toronto Department of Obstetrics and Gynaecology does in Kenya through AMPATH. We currently are fortunate to have a generous donor who has agreed to match all donations received through this fundraising campaign. Your donation will be used to continue to grow our local team and our work to support the women of Western Kenya.

Sincerely,

DONATE NOW

Rachel Spitzer, Vice Chair Global Health and Advocacy, University of Toronto Department of Obstetrics and Gynaecology

In this issue:

***Dr. Astrid Christoffersen-Deb** (Field Director, AMPATH-RH), **Dr. Lee Learman** (Chair, Department of Obstetrics and Gynaecology, Indiana University), and **Dr. Heather Millar** (Team Leader, AMPATH-RH)*

AMPATH-RH Team Leader Update

This year, I have the opportunity to fulfill a dream of mine – to live and work full time in a developing country as part of a program that I believe is doing development work in a way that is sustainable, ethical, and is making a difference in women's lives. I am the current Reproductive Health Team Leader for the AMPATH Consortium in Western Kenya, a position that includes cross-appointments with the Moi University School of Medicine, Indiana University School of Medicine and University of Toronto Department of Obstetrics and Gynaecology. My position includes clinical care as a staff physician in the Department of Reproductive Health at Moi Teaching and Referral Hospital (MTRH), supervision and teaching of North American and Kenyan learners, and research and project management as part of the AMPATH Consortium.

I first discovered AMPATH as a medical student in 2008 when I came to Eldoret on a summer research elective and, at that time, knew that I had found something special. I then returned again as a senior medical student and as a resident in Obstetrics and Gynaecology. I knew that I wanted my long-term career to include participation in this program.

As many of you reading this newsletter know, AMPATH is a unique partnership. Dr. Joe Mamlin, one of the founders of AMPATH and the current Field Director, recently said, "AMPATH responds to the general idea that academic medical centres hold hidden potential to do wonderful things for people who are left out."

Since arriving back in Kenya in September, 2015, I have experienced, even more fully, the incredible breadth and depth of this organization. Clinically, we are involved in day-to-day teaching and patient care on almost all wards at MTRH and at health centres throughout Western Kenya. We have supported the establishment of a new Chronic Disease Management Centre and Cardiac Care Unit. We lead multiple primary care economic interventions, with the help and leadership of hundreds of community health volunteers and peer educators. We run a health insurance program, microfinance programs for women's groups, an income-generating artisan workshop, and a permaculture farm for street youth. All of these programs are implemented and managed with our Kenyan colleagues.

Field team congratulating Dr. Christoffersen-Deb on the arrival of her new baby, Peder!

Within the Department of Reproductive Health, we are equally busy. We continue to support bilateral educational exchanges, with Kenyan, Canadian, and American medical students, residents, fellows and faculty regularly travelling across the ocean to participate in what is often a life-changing experience. In October, 2015, we graduated the first group of Obstetrician/Gynaecologists trained through the MMED program at Moi University. Four of these new Staff/Consultants

have joined the team at MTRH and two of them (Dr. Kosgei and Dr. Bett) will be jointly employed by AMPATH. We have implemented a Gynecologic Oncology Fellowship Program in Eldoret, which has now graduated its first Gynecologic Oncologists, both of whom remain as Consultants at MTRH to provide better cancer prevention and care to the women of Western Kenya. We are currently submitting a proposed curriculum for a Maternal Fetal Medicine Fellowship, which will aim to accept its first candidates in September, 2016. We continue to participate in Quality Improvement projects throughout MTRH focused on improving health outcomes for women and babies, including the implementation of a contraception clinic for women with chronic disease, the development of a comprehensive adolescent clinic, as well as research projects aiming to characterize the burden and specific determinants of morbidity and mortality for women with hypertensive disorders of pregnancy, cardiac disease in pregnancy, GBS transmission in labor, and gestational diabetes.

Drs. Muyala Liko, Wycliffe Kosgei, Emmy Soi, Richard Mogeni, and Bett Kipchumba *(5 of the 7 new Obstetrician/Gynaecologists who recently graduated from the MMED program at Moi University School of Medicine)*

We also have a large team working on community-level primary care programs aimed at improving maternal, newborn and child health. These programs have been led by Astrid Christoffersen-Deb, Field Director for AMPATH-RH, with support from Grand Challenges Canada. (see the newsletter article by Justus Elung'at for some of our proudest accomplishments).

For those who have participated in the AMPATH Consortium, we hope that this newsletter will bring back warm memories and will inspire you with what has been achieved over the course of the University of Toronto's involvement since 2007. As they say in Swahili, "*Pole Pole*" (slowly slowly) we are helping to improve the lives of women and children in Western Kenya. Your assistance and support do make a difference by allowing us to dream big.

Dr. Heather Millar is the AMPATH-RH Team Leader in Western Kenya. She first became involved in AMPATH in 2008 as a medical student at the University of Toronto and her involvement in the program has grown ever since.

OSCE Exams

Drs. Julie Wright *(Infectious Disease Fellow),* ***Saudah Farooqui*** *(MUSM Registrar) and* ***Astrid Christoffersen-Deb*** *(Field Director, AMPATH-RH)*

Joann Chebet Keter *(Intern, AMPATH-RH),* ***Justus Elung'at*** *(Project Coordinator, AMPATH-RH), and* ***Elvirah Riungu*** *(Research Assistant and Project Manager, Malezi Mema Program)*

Community Projects

It is with great pleasure that we introduce exciting projects in Kenya called *Chama cha MamaToto and Malezi Mema*. These projects are being fueled by the tremendous efforts of young energetic, intelligent and creative Canadians and Kenyans through the AMPATH-RH Collaboration, with support from Grand Challenges Canada.

Chama cha MamaToto (*chamas*) is a peer-support model that groups together pregnant women in Bunyala sub-county in Western Kenya. The name "chamas" is a translation of an English term "groups" while "MamaToto" is a translation of "Mother Baby." *Chamas* are tailored to the needs of pregnant women. Central to the approach is the integration of health, social and financial literacy education with a savings/loans program. *Chamas* are designed to improve maternal, newborn and child health (MNCH) by generating positive peer support for women to advocate for themselves and account for the care they receive. We have combined best practices from women's health groups and microfinance programs to design an integrated service delivery platform that is low-cost, self-sustaining and self-managed. *Chamas* do not rely on a major financial institution to manage their funds or their group. They depend on women gaining the skills necessary to own their futures. Members become shareholders in each other's futures, not only by the disbursement of loans, but by keeping each other accountable to healthy practices and relationships for themselves and their families.

Women meet bi-weekly and during meetings, they discuss social and health topics, learn accounting and safekeeping skills and receive mentorship from their peers to engage in income generating activities.

We were excited to find that from October, 2012 – October, 2013, compared to controls, *chama* women were 73% more likely to attend 4 prenatal visits, 67% more likely to deliver in facility, 75% more likely to breastfeed exclusively to 6 months and 98% more likely to receive a CHW home visit <48hrs of birth. All of these outcomes were statistically significant.

Malezi Mema is a translation from English meaning "good parenting." This program will be layered onto the Chama Cha Mamatoto program and will teach a foundation for strong parenting in early childhood. We hypothesize that these skills will translate into better cognitive and physical development of the children involved in the program. The curriculum for this project is currently being developed as an adaptation of a successful South African program, entitled "Sinovuyo Caring Families Project." The Malezi Mema program will be launched in January 2016 after a training of Community Heath Volunteer facilitators and will be delivered over 9 months, with evaluation of outcomes in the fall of 2016.

Justus Elung'at is a Project Coordinator for AMPATH-RH. He first joined the team in January 2012. Prior to working with us, he was working as a Field Project Coordinator with Global Network. He has a Bachelor of Science in medical microbiology from Jomo Kenyatta University of Agriculture and Technology and is now completing his Master's of Public Health at Moi University. Justus is a natural leader, with the ability to inspire our team, and bring people together to work towards a common goal.

***Dr. Jane Namugga** (Fellow) and **Dr. Barry Rosen** (Section Lead, Gynaecologic Oncology)*

Gynaecologic Oncology Fellowship – Toronto Elective

As part of our fellowship training in Gynaecologic Oncology at Moi University School of Medicine, Dr. Gregg Ganda and I had the opportunity to visit Toronto for 6 weeks in May. This visit was the first trip to Canada for both of us and was the first time I had visited any country other than Kenya. I had so many expectations and indeed what I saw was spectacular.

The organization by Dr. Barry Rosen was so efficient. We were received with such warmth - it was overwhelming! We were met by Shayna Henry, one of the department interns, who took the trouble to give us our first orientation in Toronto. Gigi Lacanlale, former secretary to Dr. Rosen, took care of every detail of our program and really made sure we were not starving.

All the departments we went to at Princess Margaret Hospital were enjoyable. Faculty were willing to teach us and people gave their time with a commitment. Special thanks go to Dr. Marjan in Pathology who introduced us to all the staff in this department, Dr. Fyles, Dr. Milosevic and Dr. Levin in the Radiation Oncology Department, and Dr. Subrata and the nurses in the Palliative Care Unit.

In all of these places, we saw courageous, compassionate, skilled, loving people. It was such an inspiration for us as we start our careers in Gynaecologic Oncology to know that there is so much that we can do for women with cancer and indeed to know that often we can cure Gynaecologic cancers.

It was not only the people in the hospital who were very nice to us but also the people on the streets of Toronto. Every time we pulled out a map to try and find our bearings, someone immediately came to our rescue. Dr. Rachel Spitzer and Dr. Rosen received us in their homes, where we enjoyed true Canadian meals and hospitality. Thank you very much!

We interacted with Gynaecologic Oncology fellows and radiation oncology fellows. They made us feel like part of their family. They taught us and took care of us in terms of making sure we were there for the shared lectures we had with them. We shared our experiences despite our different backgrounds.

We also visited different places in Canada. We were able to go to Niagara Falls and enjoy the breeze. On our way to Niagara, we visited a winery where we tasted sweet wine. We were told it is made only in Canada - unfortunately the souvenir I was bringing back home was confiscated at the airport. I accidentally put it in my carry-on bag! I am sure they enjoyed it. We enjoyed the museums, parks, Niagara-on-the-Lake, Ripley's Aquarium, Casa Loma, and Chinatown, where we bought small gifts to take back to our families. We also attended the Annual SOGC meeting in Quebec City, learnt from research done, and wined and dined afterwards.

We learned a lot on this trip and we cannot take for granted what someone must have given to make it possible for us to enjoy the academic and social life of Toronto. We really appreciate and are thankful that someone put the giving to good use. We shall forever remain changed and inspired to do better for our population learning from you.

Jane Namugga is a Fellow in Gynaecologic Oncology, a program that was started through the AMPATH-RH Collaboration in 2010, under the leadership of Dr. Barry Rosen. She is from Uganda and her family remains in Kampala while she lives in Eldoret (travelling back home many weekends!) in order to become one of Sub-Saharan Africa's few specialists in Gynaecologic Oncology. After fellowship, she plans to return to Uganda to start her own Gynaecologic Oncology practice and, in the longer-term, be one of the faculty to lead a Ugandan fellowship program.

Dr. Bett Kipchumba *(Consultant, Obstetrics and Gynaecology) and* ***Hans Sitters*** *(Midwife)*

Proud – Highlight from Riley Mother Baby Hospital

One of our real highlights of 2015 at Riley Mother Baby Hospital was the management of a woman named Cecilia, with severe preeclampsia (PET). When we met Cecilia, she was pregnant for the fourth time, with 3 previous pregnancies that had not gone further than 28 weeks gestation. Each of these pregnancies had been complicated by severe preeclampsia and each baby had died *in-utero* before viability.

In her current pregnancy, Cecilia was admitted again around the same gestation with severe PET. In spite of our management, the fetus was not growing well and her blood pressure remained very high. Each day, I saw Cecilia and we had good talks about her expectations. At 29 weeks, the non-stress test and biophysical profile (both measures of the baby's well-being) became abnormal. We talked about whether or not to do a caesarean section to get the baby out. She and her husband were very realistic and they knew that this baby - now estimated to be approximately 900 grams - would probably not survive in our set-up, where we have no surfactant and a high rate of neonatal sepsis.

Despite this, Cecilia was very clear in her wishes. She told me she wanted to hold a living baby once in her life and she was willing to undergo a caesarean section for that purpose alone. Her husband asked me whether I believed in miracles and I said that I did. It was heartbreaking and at the same time very reasonable. Consultant, Dr. Bett Kipchumba, agreed and therefore, performed the caesarean section. The paediatricians were also involved in the decision-making and agreed that we should give her this opportunity.

Cecilia's caesarean section was uneventful. A small girl was born, weighing 900 grams, and she cried immediately. She was taken to the Newborn Unit (NBU). The parents were so happy and proud that the baby was alive and they could call themselves mum and dad. In the following days, Dr. Bett and I went to the NBU several times and spoke with each other on the phone over the weekend, both of us expecting this small baby to give up or have complications.

However, this baby was determined not only to let her mother hold her alive, but she wanted to stay, wanted to grow and wanted to be named. Even more, she wanted to leave the hospital in the arms of her mother. As time went on, we all experienced the miracle that I had told her husband I believed in. After 6 weeks, Cecilia left the hospital with her baby, accompanied by her husband, as a very happy family. The baby then weighed 1700 grams. We all felt so proud.

This story is a miracle here because of the limited resources we have to care for premature babies. Over time, with more investment into upgrading our Mother Baby Hospital and Newborn Unit and ongoing training of Obstetrician/Gynaecologists and Neonatologists, we hope to continue to develop into a strong academic setting where the survival of these babies (and their mothers!) will no longer be uncertain and we will have more opportunities to feel proud.

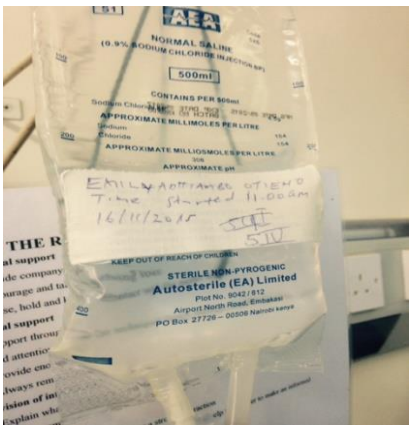
Han Sitters is a Midwife from the Netherlands who has been working at Moi Teaching and Referral Hospital on the Labor and Ante/Post-natal Wards for ~10years. She is an enthusiastic teacher of learners at all levels, including Canadian and U.S. medical trainees on elective in Eldoret, as well as Kenyan nurses, interns, and registrars. She has been an active partner in AMPATH-RH and regularly takes the lead on quality improvement projects in Reproductive Health.

Dr. Bett Kipchumba is one of the new Consultants in Obstetrics and Gynaecology, one of the graduates of the first class of the MMED Program (Residency Program) at Moi University School of Medicine, a program that was initiated in collaboration with AMPATH-RH. Dr. Bett had the opportunity to travel to Indiana University through the AMPATH Collaboration to do an elective in Obstetrics and Gynaecology in 2014. He has now been hired at Moi Teaching and Referral Hospital, with a joint appointment to AMPATH-RH.

Dr. Tess Meuleman *(Resident, Leiden University, The Netherlands) and* ***Dr. Heather Millar (****AMPATH-RH Team Leader)*

Resident Experience in Eldoret

For anyone who has worked on the labour ward at Moi Teaching Referral Hospital (MTRH), the picture of the IV bag with oxytocin is very recognizable: the white strapping with the patient's name and the amount of oxytocin stuck to the bag. The oxytocin rate is calculated based on 'drops per minute' and this is increased according to the strength and frequency of contractions.



Unfortunately, this system is inaccurate and not easy to monitor on a labour ward that accommodates 1000-2000 deliveries per month. Many times, the IV bag runs out and there is no oxytocin running for hours. Other times, the IV drips can run too fast and this can result in hyperstimulation – causing complications such as fetal distress, postpartum haemorrhage (PPH), or even rupture of the uterus. Giving the precise amount of oxytocin to a patient at MTRH is a challenge and, most times, impossible.

As a second-year resident in Obstetrics and Gynaecology from the Netherlands completing a 3-month elective on the labour ward at MTRH, this was a problem that I noticed and felt I could do something about. With the help of my husband (Bas Vestjens, a tropical medicine physician) and a Dutch fund established by him and his parents, we have been able to order 12 IV infusion pumps from a pharmaceutical company in Nairobi (Autosteril (EA) Ltd) for the labour ward.

These 12 IV infusion pumps will be a great improvement for the labour ward. Han Sitters, the Dutch Midwife who works full-time on the labour ward at MTRH, will train all medical personnel on using the infusion pumps correctly. She will also be responsible for maintenance and the service contract with the provider. We hope and really think that by managing the amount of oxytocin precisely with the new infusion pumps, complications due to overdosing or under-dosing will decrease, so that this important medication can be used safely to lead to better maternal and fetal outcomes.

Tess Meuleman, 2nd year Obstetrics and Gynaecology Resident, Leiden University Medical Centre, The Netherlands.

***Dr. Caitlin Parks** (2014-2015 Team Leader), **Christabell Omukagah**, (Clinic Coordinator/Research Assistant), and **Gratia Khaemba**, (Clinic Nurse)*

Family Planning Clinic

In April, 2015, through the AMPATH-RH Collaboration, we started an implementation-focused study entitled: 'Can Integration of Directed Family Planning Services into Anticoagulation Monitoring Services Improve Uptake of Long-Acting Reversible Contraception?', aimed at increasing uptake of contraception in women for whom a pregnancy would be high risk. Since the study began, we have started a Family Planning Clinic in the Moi Teaching and Referral Hospital's new Chronic Disease Management building and we have counseled and enrolled over 200 patients from the anticoagulation clinic. We have also seen demand from other women with chronic disease and have, therefore, expanded the study and the clinic to include women with cardiac disease, cancer, hypertension, diabetes, kidney disease and mental illness. So far, we have provided over 400 of these women with long term forms of contraception; that is, either Depo Provera injection, Progestin-only implant or Copper IUCD. As we approach our study's calculated sample size, we take a look at our primary data and we are able to report that we have seen a statistically significant increase in use of Tier 1 (including IUCD, implants, and permanent sterilization) and Tier 2 (including pills, injectables, the patch, the vaginal ring) forms of contraception from 34% to 63% of women.

Aside from providing counseling and long-term methods of family planning for free, the clinic has given us an opportunity to help some of these vulnerable women with obstetric and gynaecologic concerns before they present with severe complications to the emergency department or to labor and delivery. One example was a 29-year-old cardiac patient on follow up at the anticoagulation clinic who we were counseling to use a method of family planning to ensure a planned and safe pregnancy. During this process, we discovered that she was already 35weeks pregnant and had been on warfarin during her entire pregnancy. Though she obviously did not need contraception at that moment, we still were concerned for her. In addition to doing an ultrasound to ensure the baby was okay, we had her admitted to the hospital in order to get alternative medication, which she could not afford on her own.

Christabell Omukagah is a Research and Project Assistant who has been working for AMPATH-RH since March, 2015. She is currently the main project lead for the Chronic Disease Family Planning Clinic. Prior to joining our team, she completed a Bachelor's Degree in Microbiology.

AMPATH TEAM

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Supported by the Department of Obstetrics and Gynaecology, University of Toronto, Canada