

AMPATH-RH

newsletter

Summer 2016 ~ Issue 2



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

Welcome to the second edition of the AMPATH-RH newsletter, an update on the extraordinary contributions that our department and university are making alongside our Kenyan Moi University 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. This newsletter, highlighting our achievements in reproductive health in Kenya, is timed to coincide with the start of the summer in North America, when we often start to take time for vacation and celebrating time together as families. Leading into the summer are specific days in May and June to acknowledge the roles in our lives of our parents through celebrations of Mother's Day and Father's Day. Modern celebrations of mothers started in the United States almost 110 years ago in West Virginia and all over the US in 1914. This American tradition has since been adopted in many countries around the world on that same second Sunday in May or has been ascribed to other related dates such as Mothering Sunday in the UK,

International Women's Day in former communist countries and other dates relevant to women in other countries globally. Commercialization aside, Mother's Day celebrates the central role that mothers have in all our lives and all that they did and continue to do for so many of us so selflessly. Nowhere is this message felt more poignantly than in the work our department collaborates on in Kenya, where the chance of death in pregnancy and childbirth remains an unacceptable 510 per 100,000 live births (WHO, 2015) compared to 7 in Canada. Women worldwide should enjoy the same rights and access to health and healthcare and to enjoying productive lives alongside their families. Our partnership in AMPATH seeks to lessen the disparities and improve maternal outcomes and outcomes in reproductive health for all women of all ages.

Some exciting highlights in this edition of our newsletter include progress in care for our adolescent women at high risk with initiation of dedicated services for this crucial population at a unique stage of development. While we have long recognized the different needs of this population in resource rich settings, the establishment of a clinic and care program for them in Eldoret represent real innovation for a group long absorbed into the same care as adults much older than them. Other highlights include progress forward in

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numerous exciting studies and descriptions of the bidirectional exchange opportunities for our postgraduate trainees.

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. My sincere acknowledgements 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.

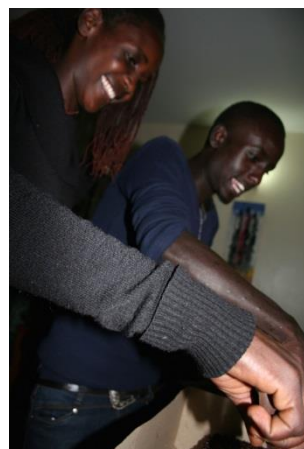
As you spend time with your family this summer and in honour of them and mothers and families everywhere, please consider supporting the work that the University of Toronto Department of Obstetrics and Gynaecology does in Kenya through AMPATH. Click on the “Donate Now” button below to access our donation page. Many thanks in advance for your support to the women of western Kenya. We could not do it without you!

Sincerely,

DONATE NOW



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



*Two of our Peer
Navigators cut the cake
at the GlobalGiving.org
Adolescent Clinic
fundraising launch (April
2016)*

AMPATH-RH Team Leader Update By Heather Millar



As I think through all of the projects and initiatives underway through the AMPATH-RH partnership, I feel proud of what has been accomplished since the University of Toronto joined this partnership in 2007, much of it already underway before I joined for what has been an amazing 9 months here as faculty. Some of our projects, which take place both within the hospital and in communities throughout Western Kenya, are highlighted in this newsletter. AMPATH-RH can now boast that it holds research funding from the Canadian Institutes for Health Research, National Institutes of Health (U.S.), the Medical Research Council (UK), USAID, and Grand Challenges Canada (with support from the Bill and Melinda Gates Foundation, USAID, DFID). These funds are supporting innovative projects in cervical cancer prevention and care, HIV prevention and care for high-risk adolescents, gestational diabetes risk stratification, and community-based strategies that are increasing uptake of antenatal care, contraception, and immunization. In addition, we are beginning to grow a care and research collaboration for women with cardiac disease in pregnancy, with colleagues from MTRH as well as the Departments of Cardiology from Duke University and Mount Sinai Hospital in Toronto.

I am particularly excited about the Adolescent Clinic, described in more detail by Dr. Paula Braitstein. While fertility rates in Kenya have been steadily decreasing overall, teenage pregnancy rates have remained unchanged for the past 5 years. 25% of Kenyan women have given birth by age 18; by age 20, this number increases to 47%. Child-bearing as an adolescent has significant immediate health risks but also alters the course of a woman’s life, including her education and earning potential. This clinic will provide care (with sexual and reproductive health as a key service but also including HIV care, life skills, mental health) as well as outreach, training, research and policy work. In the

long-term, we'd like this clinic space to become a "Centre of Excellence" for adolescent health care, training and research (the 3 prongs of the AMPATH mission).



With a group of Registrars in June 2016.

Above all, the most enjoyable part of my time as AMPATH-RH Team Leader in Eldoret has been working with the growing group of inspiring and hard-working Kenyan colleagues in our AMPATH-RH research and project team as well as the now full complement of Obstetrics and Gynaecology residents (now numbering 29 in total!) and staff physicians (18) at Moi Teaching and Referral Hospital (MTRH). This group of colleagues works hard to improve the lives of women and children in Kenya, often under difficult and stressful circumstances. They are the real future of the AMPATH-RH collaboration and are Kenya's leaders in women's health. It has been an honour to have been welcomed into their team.

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.



Some of our Peer Navigators and other clinic staff in front of the building allocated to the Adolescent Clinic (pre-renovation!)

AMPATH-RH Adolescent Clinic: A Tale of Convergence in Research and Care

By Paula Braitstein



After many years of struggle, through the combined and sustained efforts of researchers, clinicians and trainees from at least four institutions, we have managed to successfully secure a site on the grounds of AMPATH and Moi Teaching and Referral Hospital (MTRH) and raise some funds towards establishing a high risk adolescent clinic. There is a critical mass of momentum and people from different disciplines at University of Toronto (including from Departments of Obstetrics and Gynaecology, Epidemiology and the Institute of Medical Sciences) along with partner institutions (MTRH, Moi University College of Health Sciences, Indiana University) who together are bringing this vision to fruition.

The vision ultimately is to provide multi-disciplinary care to 'high risk' adolescents, including reproductive and mental health services, along with HIV treatment and basic primary care. To begin, the clinic will primarily serve the growing number of adolescents living with HIV, both those 'vertically' and 'horizontally' infected, and the growing population of street children and youth in Eldoret.

One third of the clinic will be devoted to being the study clinic for the OSCAR study, a ten year R01 study funded by the National Institute of Child Health and Human Development in the United States to evaluate care environment characteristics and cost-effectiveness among orphaned and separated children (PI's: Braitstein, Ayuku).

The study is a longitudinal cohort of 2500 orphaned and separated children aged 18 years and below at enrolment. Half the cohort is children living in one of 18 Charitable Childrens Institutions (orphanages, rescue centers) in Uasin Gishu County (of which Eldoret is the capital), and half in 300 extended family households caring for orphaned and separated children, randomly selected from six rural and urban Locations around Uasin Gishu.



Launch party for GlobalGiving.org Adolescent Clinic fundraiser (April 2016)

It also includes 100 street children and youth. To be able to conduct ethical research with street children, we felt it necessary to leverage our original clinic infrastructure to provide at least first aid and referrals to MTRH as needed.

This enabled us to conduct a series of cross-sectional and qualitative studies about the substance use, sexual behaviors and reproductive health of SCY, along with a longitudinal evaluation of their physical and mental health through OSCAR, and a case-series study of causes of death among street youth in Eldoret.

About 1.5 years ago we received funding through ICATCH of the American Association of Pediatrics to pilot Peer Navigators (PN) to engage street youth in HIV testing and care. We found and communicated that street children and youth are a large, growing, and extremely vulnerable population in need of acute and chronic healthcare. From May 2015 until March 2016 our PN (one male, one female of mixed HIV status but both former street youth) have conducted baseline interviews with 424 street children and youth aged less than 25 years. They have been very successful at engaging this population into HIV testing, with 343 SCY getting tested for HIV through the PN. Between those already known HIV-positive and those newly testing positive, there are 49 (12%) street children and youth living with HIV in Eldoret, that we know about, and most of them are girls and women (33/134 – 25% - females are HIV-positive). As OSCAR 2.0 starts up, it will continue to follow this small cohort of SCY, and help to support the engagement into and provision of clinical care, support and referrals to SCY in Eldoret through this exciting and innovative adolescent care and research clinic.

We recently successfully competed for a Canadian Institutes of Health Research HIV Implementation Science Component 1 award to identify, adapt, and pilot

interventions to meaningfully and ethically engage street youth into the HIV prevention-care continuum. Involving street youth, pediatricians, obstetricians and gynaecologists, epidemiologists, anthropologists, faculty, a post-doctoral fellow, and doctoral students, this study will pioneer our understanding of how to deliver HIV prevention and care to this high risk and very vulnerable population. We are leading the development and implementation of evidence-based care by developing care-based evidence and will demonstrate the potential of multidisciplinary and multi-stakeholder academic and community partnerships to respond to the needs of these high risk populations.

Paula Braitstein, PhD is Associate Professor and CIHR Chair of Applied Public Health in the Dalla Lana School of Public Health, University of Toronto.

AMPATH Plus - Maternal Newborn and Child Health and Nutrition Department (MNCH/FP) **By Wycliffe Kosgei**



Research and Program highlights from Dr. Wycliffe Kosgei, Obstetrician/Gynaecologist and Program Manager for AMPATH MNCH/FP

AMPATH Plus Kenya is an institution composed of Moi University, Moi Teaching and Referral Hospital (MTRH) and consortium of North American academic health centers including the University of Toronto. It is an academic health partnership with a mission of providing care, training and research. These three components are all essential for successfully addressing the challenges of global health.

Maternal Newborn Child Health/Family Planning (MNCH/FP) is one of departments within the AMPATH Plus Program that aims to improve the lives of mothers and children especially in “hard to reach” and marginalized communities of western Kenya. These regions are usually vast with poor road networks,

infrastructure and limited access to health care. These have translated into dismal maternal and child health outcomes. For example, West Pokot, a region in North-western Kenya has a Maternal Mortality Ratio (MMR) of 565/100,000 (Kavita et al, 2007) and Infant Mortality Rate (IMR) of 108/1000.

MNCH/FP, working together with county governments, assists the counties on various health initiatives related to maternal and child health by providing financial, technical and programmatic support. It also provides training, mentorship and supervision of county health staff. Over the years, the department has supported Focused Antenatal Care (FANC), Prevention of Maternal to Child Transmission of HIV (PMTCT), Basic Emergency Obstetric and Newborn Care (BEmONC), Postnatal Care (PNC), immunization programs, child growth monitoring and Water Sanitation and Hygiene (WASH) activities.

Through the activities of the MNCH/ FP department, there have been great improvements in maternal and child health outcomes in our catchment area. In particular, between 2012 and 2016, there has been an increase in uptake of 4th ANC visit by 57%, an increase in delivery by a skilled birth attendant by 59%, and improved uptake of postnatal care by 63%. Due to increased access to family planning commodities, health care workers and Community-based Distribution training, the Couple Years of Protection (CYP) has increased by 41%. Overall, this has contributed to up to 50% reductions in MMR and IMR in the counties in which the MNCH/FP department operates.

STRiDE Study – Gestational Diabetes (GDM):

(Ethnic Specific Risk STRatification In early pregnancy for identifying mothers at risk of gestational Diabetes mEllitus (STRiDE))

In keeping with AMPATH's mission of improving care through research, both MTRH and Moi University are part of a multi-centre STRiDE study that includes India and is being administered by the University of Warwick, UK, with funding from the Medical Research Council of the UK.

The STRiDE study aims develop an accurate score, based on easily obtainable risk factors that are present before 20 weeks gestation, that can be used to stratify women at risk of GDM in low resource centres. The study intends to determine if a selective screening strategy would be cost-effective in Kenya and India. In the study, OGTT results of 4,000 pregnant women in Kenya, will be compared to risk factors for GDM (e.g. point-of-care HbA1c, BMI, family history).

The STRiDE study hopes to develop a risk score that can accurately predict risk of GDM in early pregnancy so that mothers in Kenya and India can be screened in a cost-effective manner, with a reduced number of unnecessary OGTT's and early intervention for those who are at high risk in order to prevent maternal and fetal complications of GDM.

AMPATH-RH Innovations Team Update

By Vincent Kibet

I have had the pleasure to work as a Project Coordinator for the AMPATH-RH Innovations team for the last one year. Our overall goal is to use research to generate information that will allow us to give recommendations and push for policy changes that will improve care for mothers and newborns. We are working on a number of exciting projects:

1. Group B Streptococcus Colonization among Pregnant Women Attending Antenatal Clinic in Western Kenya
This study aimed to determine the prevalence of GBS colonization and the antibiotic susceptibility profile in women attending Antenatal Clinic (ANC) at Moi Teaching and Referral Hospital (MTRH), Eldoret, and also to evaluate the feasibility of a screen and treat program. We enrolled 387 women and GBS was cultured in only 8 of these women, representing a 2.1% prevalence in this population. A screen and treat program is therefore not feasible in our setting given the low prevalence of GBS among pregnant women. For us, the current drive to refine point-of-care diagnostic tools for neonatal sepsis may produce more appropriate tests that can be used in our setting to reduce current high rates of neonatal morbidity and mortality.



From left to right: Back row: Vincent Kibet, AMPATH-RH Innovations Team Project Coordinator; Dennis Ekada, Research Assistant; Christian Ochieng, Data Manager. Front row: Christabell Omukagah, Research Assistant; Marsha Alera, Research Assistant.

2. The effect of free maternity care on maternal and fetal outcomes of preeclampsia/eclampsia at a teaching and referral hospital in Western Kenya. This study aimed to evaluate the effect of the Kenyan Free Maternity Care policy on the clinical presentation of preeclampsia and eclampsia at MTRH. This policy was implemented by the government of Kenya on June 1, 2013, with the goal of encouraging more mothers to deliver in hospitals with skilled birth attendants. The hope was that this would lower the maternal and neonatal mortality rates across the country. However, this policy also led to an influx of patients to government health facilities, without necessarily an increased in funding to those facilities to handle the increased patient numbers. A retrospective chart review was performed, with 1035 patients included for analysis. Currently, data analysis is being performed to understand the clinical presentation of women with hypertensive disorders of pregnancy at MTRH, the characteristics of women who die due to these disorders, the effect of expectant management in women who are preterm, and how all of these characteristics have changed with the advent of free maternity care.

3. In April 2015, 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 Center for Chronic Disease Management and we have counseled and enrolled over 200 women 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 750 of these women with long-acting forms of contraception: Depo Provera injection, Progestin-only implant or Copper IUCD. In addition to contraception counseling and provision, the clinic has allowed some of these women to receive early care for obstetric and gynaecologic conditions, before they present with severe complications.

Vincent Kibet is the Project Coordinator for the AMPATH-RH Innovations team.

Maternal Fetal Medicine Fellow Elective Experience **By Chris Nash**

I recently had the opportunity to be the first University of Toronto MFM fellow to do an elective at Moi Teaching and Referral Hospital through the AMPATH program. My month elective flew by and I have nothing but fond memories of my time in Kenya.

This elective allowed me to spend a significant amount of time interacting with the OB registrars and Medical Officers. I rounded daily with the teams on the antenatal wards. Through these interactions, I was able to do a lot of bedside teaching regarding the management of complex medical disorders in pregnancy. In exchange, I too learned a lot from the registrars about conditions not commonly seen in a downtown Toronto hospital, such as cerebral malaria.

Each day, I had the opportunity to conduct teaching sessions both with the obstetric and radiology registrars. Through these sessions not only did we review the current evidence, but I was also able to discuss the role of a maternal-fetal medicine specialist in the management of the disorder in pregnancy.



Chris Nash, UofT MFM Fellow; Sandra Huynh, UofT Medical Student; Joseph Mpalirwa, UofT Medical Student; Ilina Datkaeva, Brown University Obstetrics and Gynaecology Resident

I also conducted sessions regarding the various uses of ultrasound in obstetrical management. These interactions helped to build excitement among the registrars for the upcoming fellowship in Maternal-Fetal Medicine at Moi University, which is being developed in collaboration with the University of Toronto and which will start enrolling fellows in September of 2017.



PGY2 Registrars with Chris Nash
Back: David N'dingori, Emmanuel Wamalwa,
Front: Sahara Shurie, Loice Luhumyo, Fatma Agil

Chris Nash is currently completing his Maternal Fetal Medicine fellowship at the University of Toronto. He spent 1 month in Eldoret in March 2016 and was a favourite to the registrars who benefited from his easy-going demeanor and daily clinical teaching.

MOI University Resident Elective in Toronto **By Soudah Farooqui**

In the third year of our masters (residency), we have a 6 week elective program, with the option to do the elective locally or to go abroad. Two students are selected each year and their elective sponsored: one to Indiana University and the other to the University of Toronto. I had the privilege of being chosen for the University of Toronto.

I must say, it was a priceless experience. I was guided through most of the paperwork by Dr. Wycliffe Kosgei and Dr. Heather Millar, before my travel, so I could work as a resident and get hands on experience when I reached Toronto.

I was received at the airport by Dr. Rachel Spitzer and taken to my hotel. She was kind enough to get me settled in and I had everything I required in my suite. I got a wonderful orientation the next day by Alissa Moody. My rotations had been preplanned with 3 weeks at the fertility clinic followed by 3 weeks at Sick Kids hospital in the pediatric and adolescent clinic. I had a wonderful experience in both places.

The staff were very welcoming and informative. I saw patients, assisted in various outpatient and inpatient procedures and interacted with consultants and residents.

There were a lot of patient-based discussions in the clinic and I learned a lot. I also attended a few rounds and resident half day teachings which were very educational.



Julie Wright, Fellow in Infectious Diseases; Saudah Farooqui, Astrid Christoffersen-Deb

Everything was very organized and preplanned. Apart from the amazing academic experience, I had a lovely social experience as well. Dr. Spitzer and Dr. Nan Okun were kind enough to host me at their homes. Dr's Julie Wright (a fellow in infectious diseases) and Julie Thorne (an obsgyn resident) also took me around. We enjoyed Niagara Falls with Julie Wright. I had the pleasure of being in Toronto when Dr. Astrid Christoffersen-Deb was there and she took me out a couple of times. Alissa Moody was also a good host and guide.

All in all I had a wonderful experience and appreciate the opportunity I was given by the University Of Toronto-Moi University collaboration.

Soudah Farooqui is a 3rd year Resident, Obstetrics & Gynaecology, MOI University



Elkanah Omenge, Gynaecologic Oncologist and Head of Department, Reproductive Health, Moi University School of Medicine



Sophie Wakesho, Data Assistant; Astrid Christoffersen-Deb, Field Director, AMPATH-RH; Justus Elung'at, Project Coordinator; Christian Ochieng, Data Manager; Baby Peder



Gynaecologic Oncology Ward Rounds: Godfrey Mutakha, Obstetrics and Gynaecology Resident; Gregg Ganda, Fellow in Gynaecologic Oncology; Barry Rosen, Gynaecologic Oncologist



Ward Rounds: Jane Namugga, Fellow in Gynaecologic Oncology; Heather Millar, AMPATH-RH Team Leader and Consultant in Obstetrics and Gynaecology



Regina Purity Lobun, Peer Navigator, OSCAR Program; Lonnie Embleton, PhD Student, University of Toronto Institute of Medical Sciences; Heather Millar, AMPATH-RH Team Leader

AMPATH TEAM

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