The cover page is a showcase of some of the scientists taking part in the Covid vaccine research at the Uganda Virus Research Institute.
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Word from the Chief Editor

Dennis Ernest Ssesanga

Dear our Partners and Program followers. We would like to welcome and interest you to read our third Annual Newsletter- the EACCR2 Heights. In this issue, we continue to showcase outstanding research articles from some of our sponsored students, staff and student profiles, besides we get to learn more about how some staff scientists have been challenged and have adapted to the covid-19 new normal as they do their work.

The issue is released in a period of the pandemic where we are being challenged to live in the new normal that is characterized with vaccination, social distancing and wearing of masks amidst keeping good hygiene practices. The paradigm in the science and research world has shifted to focusing on how we can adapt to the new normal as we deliver our everyday to day work that existed before the global pandemic. Working on this edition has surely been tremendous exciting as we have managed to compile some exceptional stories from staff around Eastern Africa. The Newsletter will serve as a trumpet to highlight and endorse the incredible work under the EACCR2 project activities.

Our gratitude goes to the Steering committee members for the guidance in producing this Newsletter, Node coordinators, students, staff for the contribution of articles and the secretariat for investing their time in editing and making the newsletter a reality.

We hope you enjoy reading this issue and we are open to any ideas that will help us improve our newsletter. Please email your ideas/views to the Chief Editor: dssesanga@uvri.go.ug.
Foreword

For more than a year, we have been with the pandemic, and this has not hindered us from delivering on the EACCR2 Network commitments. The pandemic has spurred the development of new ways to serve and fulfill our targets in the new normal. The partners in the Eastern Africa Consortium for Clinical Research (EACCR2) have continued to prioritize and engage in capacity building activities and preparedness to conduct COVID-19 for clinical trials using creativity and innovation in partnership with research institutions in the region. We are hopeful that the trials will yield positive results to benefit the region and Africa as whole.

EACCR2 is part of 2 large ICH-GCP-compliant clinical trials on TB-HIV in Uganda and Tanzania. These include the EXIT-TB study which is a cluster randomized study on improving TB treatment outcomes; the PrEPVac vaccine efficacy clinical trial involving 600 volunteers from Europe and Africa. The HIV node partners were involved in the WELTEL study in Kenya which explored the use of short text phone messages to improve retention of mother-baby pairs in the prevention of mother to child transmission of HIV (PMTCT) programs in Kenya.

The network trained 25 clinical research associates in the reciprocal monitoring scheme (RMS). Of the 25, 4 RMS monitors received accreditation from the Association of Clinical Research Professionals (ACRP). These monitors have monitored more than 30 clinical studies in the region. This has not only improved the quality of the studies being conducted, but also lowered the cost of clinical study monitoring in the region.

Currently, EACCR2 has over 25 fully functional clinical laboratories accredited to GCLP international standards (https://slmta.org/accredited-labs). These laboratories can be used by the network or contracted by an external clinical trial sponsor to support clinical trials in Africa.

Partners in EACCR2 successfully published 8 papers in peer reviewed journals and a number of draft manuscripts are awaiting publication. The partners all together leveraged on previous investments and were able to win over 20 M Euros in additional funding from EDCTP and other agencies. The partners in Tanzania, Sudan and Uganda are part of 4 other research Consortia including African Coalition for Epidemic Response and Research (ALERRT), Pan African Network for Rapid Research, response and Preparedness for Infectious disease epidemic (PANDORA). All these have been possible because of the leveraged strength between the northern and southern partners in the EACCR2.

I commend the entire EACCR team for believing in the work that we do and for utilizing the potential that exists in the networks of excellence. I acknowledge EDCTP for investing in the networks of excellence and for creating avenues for working together to solve problems affecting our communities in Africa.
Remarks from the Chairman EACCR2-

Steering Committee

I hereby congratulate all partners for the achievements this far despite the anguish, anxiety and uncertainties brought by COVID-19. I thank the team working on Eastern Africa Consortium for Clinical Research (EACCR2) for prioritizing and continuing to engage in capacity building activities for clinical trials using virtual meetings, innovation and creativity to accomplish activities in the remaining part of the year.

I take the pleasure to remind of the vision of EACCR – which is “to become a center of excellence in clinical trials with very good quality clinical trials that contribute evidence to policy, practice, and knowledge to improve wellbeing of communities and fight the poverty related diseases. I applaud all partners for contributing to the attainment of this.

The success and visibility of EACCR2 as a capacity building Network funded by EDCTP in Eastern Africa depended much on the investments started by EDCTP 1 and impact created right from EACCR1 in 2009 to the achievements to date.

The idea of working with National Disease Programs in our home countries should be embraced if countries in Eastern Africa are to contribute research evidence for policy, practice and community well being in Eastern Africa. I cordially congratulate the node coordinators and the EACCR2 for the 2 years of project implementation well spent.

I further acknowledge EDCTP and appreciate the support and efforts of the node coordinators and Members of the Steering Committee for the guidance.

I am still hopeful that the partnerships and foundations created will help us realise more traction in the clinical research efforts directed towards social transformation.

Thanks to all members of the steering committee for supporting the vision.

“The idea of working with National Disease Programs in our home countries should be embraced if countries in Eastern Africa are to contribute research evidence for policy, practice and community well being in Eastern Africa.”

Dr Samuel Okware - Chairman(Interim) EACCR2,
Steering Committee.
Remarks from the Deputy Coordinator

**EACCR2**

Inspite of the social distancing during COVID-19 pandemic, digital technology has enabled partners to actively work together to accomplish tasks including writing and submitting successful grant proposals in time!

The EACCR2 Training node developed a comprehensive training and mentorship plan for career development fellows, long and short term mentorship exchange programs. All together, 265 people have been trained in 10 different short courses across the network in this project year. Additionally, 4 post docs, 15 students (1 PhD and 14 MScs) are being supported by the consortium for long term training. EACCR2 in partnership with CHUV and the University of Laussane build capacity for 8 MSc Vaccinology students. We are opportunistic that these students will contribute to the quality of vaccines trials conducted in the region.

Among the courses offered in the network were the GCP training of trainers’ course, and the GCLP training of trainers’ course in which a total of 28 participants were trained. More than 50 individuals trained in ICH-GCP and GCLP across the network.

Additionally, the HIV node increased the data holding capacity at Uganda Virus Research Institute by buying additional space for the data servers at the institute and this space is being used by other studies at the institute and within the region.

The EACCR2 developed a data sharing plan and established a data managers’ network which is aimed at improving data management across the region.

The network has continued to use its website, Twitter and and Face book [@EACCR2] for Facebook and Twitter. handles to create awareness about activities of EACCR2. These have continued to give EACCR2 visibility in the Eastern Africa region and beyond.

I applaud the entire EACCR2 team upon the registered success and also gratefully thank EDCTP for its investment in the networks of excellence in Africa.

**Prof. Blandina Mmbaga is Deputy Coordinator EACCR2**

"Good clinical practice (GCP) provides a framework of principles which aim to ensure the safety of research participants and the integrity and validity of data. This short course aims to provide the researcher with the basic principles of GCP and how these principles can be applied practically in the research setting. The course is aimed at all those involved in clinical research."

~The Global Health Network
Reciprocal Monitoring Scheme

Strengthening strategic quality management and monitoring of clinical research

By Annet Nanvubya-Coordinator Reciprocal Monitoring Scheme

Annet Nanvubya is the coordinator of the reciprocal monitoring scheme

About my work.

I coordinate the Reciprocal Monitoring scheme (RMS) activities. The RMS is an arm of the EDCTP-funded East African Consortium for Clinical Research, a network of excellence that is mandated to strengthen and support strategic quality management and monitoring of clinical research conducted in the East African Region. The scheme brings together monitors from member institutions within the network to conduct monitoring of selected clinical trials across the East African Region.

The Challenges At Work

Some of the challenges encountered include, staff turn over of the already trained and experienced monitors. Monitoring requires that that monitors are available to monitor when required. Workload balancing for the monitors between their primary jobs and monitoring is difficult. Monitoring is a time consuming activity that requires monitors to dedicate time for work and travel. Some monitors travel to other countries to monitor hence requiring them to leave their families. Such monitors require a lot of motivation and support.

Limited funding to support clinical monitoring activities is another challenge I grapple with. Monitors may be willing and available to monitor but in the absence of funds, monitoring activities are suspended. Keeping the monitors interested and up to date is hard when monitoring activities are paused or suspended. During such times when funding is not available or is limited, the monitors undertake consultative monitoring projects.

What are the likely trends of your work in the Covid-19 new normal?

The advent of COVID-19 has introduced remote coordination of activities. Previously, I used to have face to face meetings with monitors, Principal Investigators and other relevant individuals. There is a growing need to invest in stable internet access and electricity. It is now inevitable to be flexible with regard to working hours in consideration of the different time zones for the monitors, sponsors and Principal Investigators.
What are the likely trends of your work in the Covid-19 new normal?
The advent of COVID-19 has introduced remote coordination of activities. Previously, we would use face to face meetings with monitors, Principal Investigators and members of the study team. In a country with unstable and slow internet, intermittently available electricity, clinical monitors using online tools meet a lot of challenges conducting and reviewing protocols online. There is a growing need to invest in stable internet access and electricity. It is now inevitable to be flexible with regard to working hours in consideration of the different time zones for the monitors, sponsors and Principal Investigators.

How do you think EACCR may contribute to the mitigation of the burden of disease due to Covid-19?
EACCR2 need to move fast to partner with research institutions in Europe and America to participate in conducting of Clinical Trials on COVID-19 research studies. EACCR2 needs to fund and also participate in COVID-19 prevention research. There seems to be a lot more questions about COVID-19 than answers.

How do you see the next five years with EACCR collaboration within the region?
As members of the RMS team, we see a lot of potential in partnerships. We see EACCR growing into a formidable research network focusing not only on HIV, TB, Malaria, Neglected diseases but on several other infectious diseases and non-communicable diseases among others. With the growing capacity of the RMS monitors, I see EACCR supporting many research institutions across the region and beyond to conduct quality research. As consultative monitoring activities continue, EACCR collaborations within the region will be stronger in the next five years.
**Staff Profile Watch**

**Who is Dr. Marion Sumari-de Boer?**

**Marion Sumari-de Boer** is a senior researcher at the Kilimanjaro Clinical Research Institute in Moshi-Tanzania. Dr. Sumari has a special focus on mixed-methods research and digital health. In 2017, she was awarded a career development fellowship (CDF) by EDCTP. Within the fellowship she was coordinating a clinical trial on digital adherence tools (DATs) for adults living with HIV (REMIND).

The main results of this clinical trial were published in March 2021 and showed that digital adherence tools did not improve mean adherence, however, DATs increased the proportion of participants with 90% adherence or more. The trial has led to a large increase in research capacity in KCRI specifically on mixed methods research.

Dr. Sumari is working with Mr. Kennedy Ngowi a PhD student in the REMIND study. Mr. Ngowi is currently finalizing the last steps of his thesis for submission to the exam committee at the University of Amsterdam.

The study team gained clinical trial experience and learned much on the aspect of ethics in research. With the team of REMIND, a proposal was written and submitted to EDCTP for a senior fellowship plus, which was awarded to Marion in September 2021.

Dr. Brenda Kateera from Rwanda a registered PhD student at the University of Amsterdam and Mr. Francis Pima from KCRI are working under the same fellowship as trainee fellows. In addition, two MSc students are also being supervised in the fellowship.

The fellowship consists of a two-stage project customizing a DAT through formative mixed methods research and testing it in clinical trials among breastfeeding women, children and adolescents.

“Always reach for the moon, then you will end up among the stars. In practice that means, be proactive, take initiative and be creative to reach your goals and do not be afraid to make mistakes. Through trial and error, you will learn.”
Through this fellowship, Marion is continuing the work of her CDF by continuous capacity building of the team at KCRI. Marion sees the high importance of mentoring junior researchers in East Africa, as they have limited exposure to the international medical research world.

The fellowships have really helped her to build and educate the team and to continue her own personal career. As an EDCTP fellow, Marion has also been actively involved in the HIV node of EACCR. In light of that, she led a pilot study on using SMS to increase awareness of pharmacovigilance among PLHIV on antiretroviral treatment, the REMIND-ADR study.

This pilot-study was conducted in KCRI- Tanzania and St. Francis Hospital Nsambya Hospital in Kampala Uganda and currently, data is being analyzed. Further, she was also leading the datamanagement activities in EACCR2 and the network of datamanagers managed to design a model data management and sharing plan. Marion highly advocates for good quality data in research.

Based on observations, she finds intensive training is warranted to continue improving on this level in order to improve validity of data, but specifically protect patients. Marion is also involved in other projects funded by EDCTP including EAPoC-VL, Protid and PAVIA. In EAPoC-VL, she was also offered a research fellow position at the Amsterdam Institute of Global Health where she is supervising one PhD student amongst others.

For Protid, Marion mainly has an advisory role to the relatively young research team in KCRI. In PAVIA, she is mostly involved in stakeholder involvement and dissemination. All these projects are helping Marion to increase her experience in mixed methods research.

Until now, COVID19 has not really affected her work. In Tanzania, all research activities can go on as normally. Moving from face-to-face meetings to zoom calls has somehow made work more efficiently although she misses traveling and seeing collaborators face-to-face.

In the next five years, Marion will strongly focus on EAPoC-VL and REMIND-KID to be finished in 2025. Marion after that hopes to lead bigger studies that could probably be funded through RIA-grants from EDCTP. In addition, she hopes to mentor a team of midcareer to senior researchers on mixed-methods research.

She would like to encourage scientists to be proactive and to “Always reach for the moon, then you will end up among the stars. In practice that means, be proactive, take initiative and be creative to reach your goals and do not be afraid to make mistakes. Through trial and error, you will learn!”
Meet Benjamin Watyaba

I am Benjamin Watyaba one of the beneficiaries of EDCTP sponsorship doing my masters in vaccinology from university of Lausanne Switzerland. Having worked in paediatric department for three years, I could tell the positive impact vaccines have on the public. Though occasionally I would meet sick children who missed their vaccination due to various myths about vaccines possessed by their parents.

We know that Immunization is a strategy to childhood survival and only second to clean water in terms of public health impact. And now one of the best preventive measures to control pandemics. However, there are barriers to effective uptake of vaccines, and they have been cited as one of areas of concern by Immunization agenda 2030.

I developed interest in contributing to vaccine pharmacovigilance by assessing the reporting of Adverse events following immunization (AEFI) among health care workers and caregivers in one of the main hospitals in Kampala Uganda.

Despite the strides made by the Uganda Expanded programme on Immunization (UNEPI), Uganda like many African countries have not met the vaccine safety indicator (to report at least 10 severe AEFIs cases per 100,000 surviving infants). Yet fear of AEFI has been cited as one of barrier for reduced vaccine uptake in Uganda.

I have submitted my proposal to the research ethics committee awaiting their approval. I intend to collect data for two months, thereafter make a report to be submitted to the University.

I intend to work on my manuscript to be published and I hope that my findings will contribute to mitigate the challenges of reporting of these events.

The emergence of covid 19 pandemic disrupted my studies and the research process, quite several of my colleagues were isolated. We could not meet for discussions, working hours were increased due to a surge of number of patients thus difficulties of getting the time to concentrate on my studies. The trip to the university to do our final exams had to be cancelled and we had to adopt to having the online classes and meetings. The research proposal has been also delayed due to changes in requirements of conducting a research during such a pandemic.

After my masters, I intend to collaborate with MoH and other stakeholders to improve identifying, reporting and management of adverse events following immunization (AEFI) especially as new covid 19 vaccines are being rolled out.
Meet Esther Mumbi Makanga

I indeed had a great time doing the vaccinology course, I would like to thank EDCTP, EACCR and KEMRI for the opportunity to do my Masters in advanced Vaccinology studies.

With the realization of the limited investments in vaccinology in Africa and drive to build capacity in area of vaccine manufacture, dealing with vaccine hesitancy, novel manufacture modalities, vaccine safety etc, I couldn’t feel more empowered than what IMVACC imparted to me through a thorough program and world class support and dedication from the tutors like:- Claude Meric and Jean-Pierre Kraehenbuhl who through their passion and experience in vaccinology were great resources.

The course spanned through background in vaccine sciences, vaccine development, vaccines and public health and project management. I feel empowered to contribute to area of vaccines across the spectrum from the laboratory - vaccine discovery all the way to the last mile during delivery of the vaccine to the child.

I’m currently undertaking my thesis project and the course also prepared me for that through project management module. I am ready and equipped to translate the knowledge gained as a vaccinologist.

“With the realization of the limited investments in vaccinology in Africa and drive to build capacity in area of vaccine manufacture, dealing with vaccine hesitancy, novel manufacture modalities, vaccine safety etc, I couldn’t feel more empowered!”
Meet Abinet Adane

I’m now finalizing my masters student in medical parasitology at the Jimma University in Ethiopia. My master’s thesis is entitled “prevalence and incidence of Plasmodium infection and associated risk factors among migrant farm workers of horizon plantation, gojeb agricultural development farm, keffa zone, south west ethiopia.”

The study was on the prevalence and incidence of Plasmodium infection and associated risk factors among migrant farm workers followed for seven months (April to October). 341 migrant farm workers participated on this study under a cross sectional survey was conducted. Participants were prospectively followed for clinical Plasmodium infection at the farm clinic to determine the incidence of malaria by passive case detection.

Out of the total of 341 study 24 (7.0%) and 27 (7.9%) were positive for Plasmodium using microscopy and the RDT, respectively. Sixteen (66.6%), 7 (29.2%) and 1 (4.16%) of the cases were due to P. falciparum, P. vivax and P. falciparum/P. vivax mixed infections, respectively.

During the follow-up period, a total of 46 new malaria cases have been detected in the health center. Overall, incidence of malaria cases among the study participants was 27 per 1000 person-months at risk.

The incidence of P. falciparum was 8.8 per 1000 population at risk. This suggests that malaria is a common problem among the migrant farm workers.
What interested you in this kind of research?

There is scarcity of information on the epidemiology of malaria for migrant farm workers in Ethiopia. Majority of malaria research focus on the general population, ignoring the segment population such as migrant farm workers. Southwestern part of Ethiopia has a large proportion of fertile lowland areas suitable for large-scale agriculture.

While several such agricultural farms exist in these areas, the epidemiological profile of malaria among the migrant farm workers is not well investigated. Gojeb agricultural developmental farm study area is one of the farm areas in which migrant farm workers are working during cultivation and harvesting period from different regions in Ethiopia for searching job, but the prevalence of malaria in this area is higher than the national figures.

As this study determined both the prevalence and incidence of malaria in this population, it will give insight to the burden and risk of malaria infection, which helps to put preventive interventions in place. Determining the risk factors associated with malaria in this segment of the population also helps to prioritize the intervention activities to successfully prevent malaria among the migrant farm workers. Moreover, the findings of this study will inform policy makers and managers at different administrative levels to consider migrant farm workers in the prevention and control of malaria.

What advice would give to young scientists joining this kind of research?

I advise young scientists to join this kind of research program to add new findings to the scientific community and also help understand malaria epidemiology. Moreover their research finding will contribute for malaria control and elimination program.

Has Covid -19 pandemics affected your studies? If yes kindly share about your experience haw you adapted?

Yes of course, in Ethiopia the first COVID-19 case was reported on 12th March 2020. My Research defense schedule was 26 March 2020. But the State of Emergency was declared based on the Federal Democratic Republic of Ethiopia (FDRE) Constitution art. 93(2)10 on 8th April 2020, valid for five months and to be extended if need be. The declaration prohibited gatherings of more than four individuals; downsized the number of travelers on public and private transport by 50% of their seating; Schools have been closed in Ethiopia since 16 March 2020, all university, both elementary and high school was lockdown.

The prohibition was applied after research completed, but the impact of COVID-19 was the research defiance schedule extending for more than seven month. Besides the research defiance extending time, it affected psychologically and increased fatigue. However, at the time of prohibition Ethiopian federal ministry of health to call all health profession to national emergency plan for Covid -19. I have taken some short course training about covid-19 sample collection and transportation, then after training I was actively involves on covid-19 sample collection and transport for tasting site.

Where do you see yourself after completing your MSC Program?

Currently working in Bonga Gebrtsadike Shawo General Hospital which is one of the general hospitals found in the southwest part of Ethiopia, the area is highly potential for research, and I am planning to do collaborative researches with Jimma University and international partners. During my practice in Bonga Gebrtsadike Shawo General Hospital I will search network like EACCR which to apply for a PhD. program and look forward for opportunities to expand my research career.
In Kenya, the high mortality rate of cervical cancer is linked to high HIV prevalence, a lack of cytology screening and early treatment programs. This is a bigger problem in informal settlements where access to treatment is a challenge due to lack of funds. On the other hand, vaccination against HPV has proven to work in other countries yet the uptake of the vaccine in Kenya is poor.

My main objective therefore is to determine the magnitude of Vaccine hesitancy and associated drivers in Mathare informal settlement; a region where adolescents are exposed to many challenges. I am certain that an in-depth discussion of vaccine hesitancy will play a big role in countering the rising skepticism of people regarding the safety and efficacy of vaccines. By better understanding the sources of hesitancy, research efforts can focus towards addressing these to improve HPV vaccine uptake.

Despite the uncertainty and anxiety exhibited during the Covid-19 pandemic, a lot of information on vaccines was shared on various platforms. This was insightful since it exploited areas of need in vaccine development and implementation of vaccination programs. This had really motivated since I was now certain that studying vaccinology was heading to the right direction towards alleviating human suffering.

Moving Forward after my master’s degree in Vaccinology, I hopei would to advance further by pursuing a PhD in the field of vaccines. In addition to this, I also look, I would like to support forward to engaging actively with both work closely with the government in Kenya and private sector in implementation of the strategies targeting vaccine preventable diseases through public health programs. I acknowledge EDCTP for the financial support extended to me to finalize this masters program and research and moral support from supervisors in EACCR2 consortuim.
Service Delivery In A Pandemic Setting:
Services & Patient Data
At The UVRI The Clinic.

Improving and maintaining service delivery at the clinic: A case study of how EACCR2-EDCTP has supported clinical services and non-clinical services at the UVRI clinic.

By Dr Nassim K, Dr B Watyaba, J Nanseko, C Mukwano, R Namubiru, Ntabadde D and F Nakanjakkko

Outstanding success strides have also been registered in this year that including new equipment new projects and new equipment research projects implemented at the UVRI Clinic during the new studies. The equipment included laptops a and server and computers that were set up in the data office at the clinic. Through the EACCR2-EDCTP funding, the clinic was able to have patient waiting areas set up thus easing the staffpatient waiting during triage. Two shades areas were built to protect the patients from rain and sun scorching and also reduce the congestion within the clinic corridors.

Work at the Uganda Virus Research Institute (UVRI) clinic entails both clinical research and non clinical routine health service operations. The routine health service clinical work includes immunisation, patient reviews, dispensing of drugs, filling the control books of the vaccine and going out for community outreaches. Other important services include family planning, antenatal and paediatric services; and patient sample and data collection for clinical research related work.

The essential non-clinical work is done by data clerks who ensure that the clinic data is accurately captured in the Redcap system and also that the patient records are kept securely and out of reach of anyone without unauthorisation. The data entrants also assist on entry of other data sets like the covid-19 data and also support the end of month data reports.

They also support filing and sorting patient records. Other non-clinical staff include cleaners who ensure the place is hygienic and safe.

The clinic often receives a high record of patients that may result in shortage of personal protective equipment (PPEs), and drugs among other challenges. During the covid-19 pandemic, we have experienced an overwhelming number of patients which has increased the chances of the staff getting exposed to infectious diseases in the clinical setting. Lastly, the other challenge has been work overload at the clinic during the pandemic that includes data entry and clerking of patients.

The trends of work at the clinic during the covid-19 new normal included routine screening and vaccination for covid-19 among visiting patients involving daily use of PPEs, observing of SOPs to avoid infections, setting targets on data entry for the Clinical Characterisation protocol (CCP) study to avoid backlog in case the pandemic becomes severe.

EACCR2 may contributed greatly to the mitigation of the burden of disease due to covid-19 by supporting research on the covid-19 vaccine and conducting more research on the drugs for the covid-19 disease.

Believe in yourself and all that you are.
Know that there is something inside of you that is greater than any obstacle.

Rebecca Helen
EACCR2 with the help of funders could as well get vaccines to reduce on the disease and also supported with the purchase of equipment needed for safety at the clinic such as masks, sanitizers and face shields, while other funders and the government of Uganda provided the badly needed COVID-19 vaccines.

The next five years of working with EACCR2 and other partners in the region will see the clinic involved in more research work and publications promoted which will support the ongoing research work. This may also lead to development of new vaccines and new studies we thank EDCTP for the support since EACCR1 which has changed the appearance and methods of work at the UVRI clinic.

Through the EDCTP funding, shelving compartments were built to help store patient files at the clinic. These were installed in the immunisation office.

A data entrant using redcap system on a computer funded by EACCR 2 as part of the HIV node infrastructure upgrade.

This waiting shade at the clinic is being used as a sample collection point for Covid 19 patients.
Background: Tanzania has recently experienced outbreaks of dengue in two coastal regions of Dar es Salaam and Tanga. Chikungunya and Rift Valley Fever outbreaks have also been recorded in the past decade. Little is known on the burden of the arboviral disease causing viruses (Dengue, Rift Valley and Chikungunya) endemically in the inter-epidemic periods. We aimed at determining the prevalence of the dengue, rift valley and chikungunya among humans in two geo ecologically distinct sites. The community-based cross-sectional study was conducted in Magugu in Manyara region and Wami-Dakawa in Morogoro region in Tanzania.

Methods: A cross-sectional serological survey was conducted in two purposively selected wards Magugu in Babati rural in Manyara region and Wami-Dakawa in Mvomero district in Morogoro region June-August 2019. Households were conveniently included in the study. Participants were interviewed using a structured questionnaire. The sampling process involved a two-stage purposive selection of districts and wards based on findings of past studies that reported the status of RVF outbreaks in Tanzania.

Results: A total of 191 samples were collected, 122 from Wami-Dakawa and 69 from Magugu. Since only one CHIKV case was detected by serology among the 69 samples collected from Magugu site, presented results include only samples collected from Wami-Dakawa site. Of the 122 individuals who participated in the study from Wami-Dakawa, 58 (47.5%) were involved in pastoralism as their main occupation while 64 (52.5%) were peasant farmers. About two thirds of the participants (65.6%) live in households with less than 5 family members. About three-fifth (60.7%) of the interviewed participants, reported not to have travelled outside Wami-Dakawa during the previous three months, with 33/48 (68.8%) of those who had travelled having travelled to an urban destination. A total of 60 (49.2%) participants had herd sizes made of less or equal 30 goats.

Conclusion: We report antibodies to RVFV to be the most prevalent followed by antibodies to CHIKV in Wami-Dakawa, in Mvomero district of Morogoro region during dry season. This study did not detect any individual in Wami-Dakawa who was seropositive to DENV. Magugu site was found to be free from both infection and exposure to RVFV, CHIKV and DENV. Larger numbers of household members in a house, having no formal education and having recently travelled to an urban destination were risk factors being seropositive CHIKV whereas being more than 5 individuals in a household, having no formal education were the only risk factors for RVFV seropositivity. Since arbovirus outbreaks occur sporadically and usually unpredictable, in nature, it is crucial to undertake active surveillance measures for RVFV, DENV, CHIKV and other viral agents in endemic countries. In addition, since our study has revealed a considerable seroprevalence to RVFV in the Wami-Dakawa study area, it is unarguably important that vaccination and surveillance systems for RVFV are strengthened to reduce RVFV trans-mission between animals and humans, which poses as a public health concern.

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Research Publications: 2

**Effect of an interactive text-messaging service on patient retention during the first year of HIV care in Kenya (WelTel Retain): an open-label, randomised parallel-group study**

Mia Liisa van der Kop, Samuel Muhula, Patrick I Nagide, Lehana Thabane, Lawrence Gelmon, Patricia Opondo Awiti, Bonface Abunah, Lennie Bazira Kyomuhangi, Matthew A Budd, Carlo Marra, Anik Patel, Sarah Karanja, David I Ojakaa, Edward J Mills, Anna Mia Ekström*, Richard Todd Lester*

**Background:** Retention of patients in HIV care is crucial to ensure timely treatment initiation, viral suppression, and to avert AIDS-related deaths. We did a randomised trial to determine whether a text-messaging intervention improved retention during the first year of HIV care.

**Methods:** This unmasked, randomised parallel-group study was done at two clinics in informal settlements in Nairobi, Kenya. Eligible participants were aged 18 years or older, HIV-positive, had their own mobile phone or access to one, and were able to use simple text messaging (or have somebody who could text message on their behalf). Participants were randomly assigned (1:1), with random block sizes of 2, 4, and 6, to the intervention or control group. Participants in the intervention group received a weekly text message from the automated WelTel service for 1 year and were asked to respond within 48 h. Participants in the control group did not receive text messages. Participants in both groups received usual care, which comprised psychosocial support and counselling; patient education; CD4 cell count; treatment; screening for tuberculosis, opportunistic infections, and sexually transmitted infections; prevention of mother-to-child transmission and family planning services; and up to two telephone calls for missed appointments. The primary outcome was retention in care at 12 months (ie, clinic attendance 10–14 months after the first visit). Participants who did not attend this 12-month appointment were traced, and we considered as retained those who were confirmed to be active in care elsewhere. The data analyst and clinic staff were masked to the group assignment, whereas participants and research nurses were not. We analysed the intention-to-treat population. This trial is registered with ClinicalTrials.gov, number NCT01630304.

**Findings:** Between April 4, 2013, and June 4, 2015, we screened 1068 individuals, of whom 700 were recruited. 349 people were allocated to the intervention group and 351 to the control group. Participants were followed up for a median of 55 weeks (IQR 51–60). At 12 months, 277 (79%) of 349 participants in the intervention group were retained, compared with 285 (81%) of 351 participants in the control group (risk ratio 0·98, 95% CI 0·91–1·05; p=0·54). There was one mild adverse event related to the intervention, a domestic dispute that occurred when a participant’s partner became suspicious of the weekly messages and follow-up calls.

**Interpretation:** This weekly text-messaging service did not improve retention of people in early HIV care. The intervention might have a modest role in improving self-perceived health-related quality of life in individuals in HIV care in similar settings.

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Objective: To make an informed viewpoint on the usefulness of Tuberculin Skin test (TST) compared to Interferon Gamma Release Assays (IGRAs) for diagnosis of Latent TB Infection (LTBI) in different geographical settings.

Methods: We reviewed the current literature on TST compared to IGRA, including national implementation of WHO LTBI recommendations and retrospective data over the past 7 years at the National Institute for Infectious Diseases “L. Spallanzani” as indirect indicator of usage of both tests under actual programmatic conditions.

Results: Current national guidelines vary considerably, reflecting the uncertainty and rapidly evolving evidence about the potential use of these tests. Data from Institute “L. Spallanzani” showed IGRA concordance in TST positive subjects only in 54.74% of subjects, while there was strong concordance between two tests in TST negative subjects (93.78%).

Conclusion: Neither IGRAs nor TST can distinguish active TB from LTBI. TST will continue to be clinically useful in low and high TB endemic areas until more accurate and predictive tests will become available. Clinical judgment remains fundamental in choosing between IGRA/TST tests and interpreting their results.

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Background: Diabetes mellitus (DM) is associated with poor TB treatment outcome. Previous studies examining the effect of DM on TB drug concentrations yielded conflicting results. No studies have been conducted to date in an African population.

Objectives: To compare exposure to TB drugs in Tanzanian TB patients with and without DM.

Patients and methods: A prospective pharmacokinetic study was performed among 20 diabetic and 20 nondiabetic Tanzanian TB patients during the intensive phase of TB treatment. Plasma pharmacokinetic parameters of isoniazid, rifampicin, pyrazinamide and ethambutol were compared using an independent-sample t-test on log-transformed data. Multiple linear regression analysis was performed to assess the effects of DM, gender, age, weight, HIV status and acetylator status on exposure to TB drugs.

Results: A trend was shown for 25% lower total exposure (AUC0–24) to rifampicin among diabetics versus nondiabetics (29.9 versus 39.9 mg·h/L, P = 0.052). The AUC0–24 and peak concentration (Cmax) of isoniazid were also lower in diabetic TB patients (5.4 versus 10.6 mg·h/L, P = 0.015 and 1.6 versus 2.8 mg/L, P = 0.013). Pyrazinamide AUC0–24 and Cmax values were non-significantly lower among diabetics (P = 0.08 and 0.09). In multivariate analyses, DM remained an independent predictor of exposure to isoniazid and rifampicin, next to acetylator status for isoniazid.

Conclusions: There is a need for individualized dosing of isoniazid and rifampicin based on plasma concentration measurements (therapeutic drug monitoring) and for clinical trials on higher doses of these TB drugs in patients with TB and DM.

*Corresponding author. E-mail: Rob.Aarnoutse@radboudumc.nl
†Present address: Babati Town Council, Manyara, Tanzania.
‡Present address: Municipal Health Centre, Groningen, The Netherlands.
§Present address: East African Health Research Commission (EAHRC), East African Community, Arusha, Tanzania.
¶Present address: Hygiene and Infection Prevention Unit, Department of Medical Microbiology, Radboud university medical center, Nijmegen, The Netherlands.

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