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EKC WEBSITE

PROGRESS REPORT

**ELSE
KRÖNER
CENTER**

FOR ADVANCED
MEDICAL & MEDICAL-
HUMANITARIAN STUDIES

WÜRZBURG-MWANZA

2022

PREAMBLE

Dear Members of our Else Kröner Center Würzburg – Mwanza,

Dear Members of the Scientific Advisory Board,

Dear Friends and Colleagues,

with this report we provide an overview on the achievements of the Else Kröner Center (EKC) Mwanza – Würzburg since its foundation in August 2020. The EKC has transformed a long-standing partnership between Mwanza and its partner city Würzburg to a new level. Over the two years, medical and humanitarian projects have been started in close collaboration between several partners from Tanzania and Germany. Important examples also showcased in this brochure include the fight against schistosomiasis in the Lake Victoria region, a lively bilateral exchange of students and medical staff between both locations as well as joint scientific projects that qualify young doctors and researchers for PhD.

As representatives of our center, we are grateful for your constant support in further advancing these activities. We hope that this report can convey some of the enthusiasm, vision and spirit that we experience in our center every day.

June 2022 - Würzburg & Mwanza

Oliver Kurzai
Stephen Mshana
Matthias Frosch

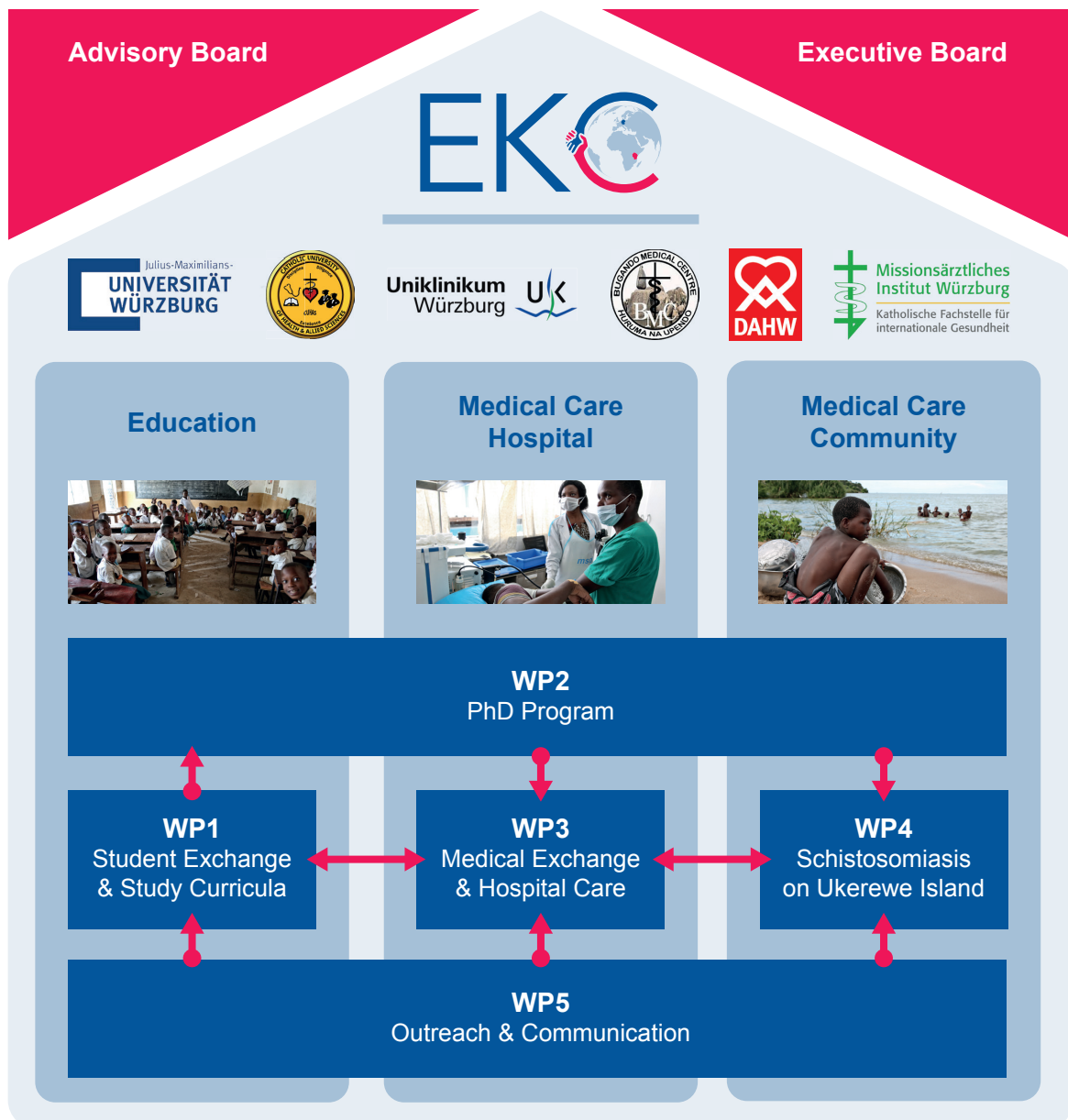
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WÜRZBURG <> MWANZA

The EKC connects partners from Mwanza in Tanzania and Würzburg in Germany. It comprises intertwined activities which span from medical education and training to improving medical care in the hospital and the fight against neglected tropical diseases. The EKC is supported by an international scientific advisory board of external experts, which advise on the strategic development of the Center.

Funding for the EKC is provided by the Else Kröner-Fresenius-Foundation (EKFS, www.ekfs.de).



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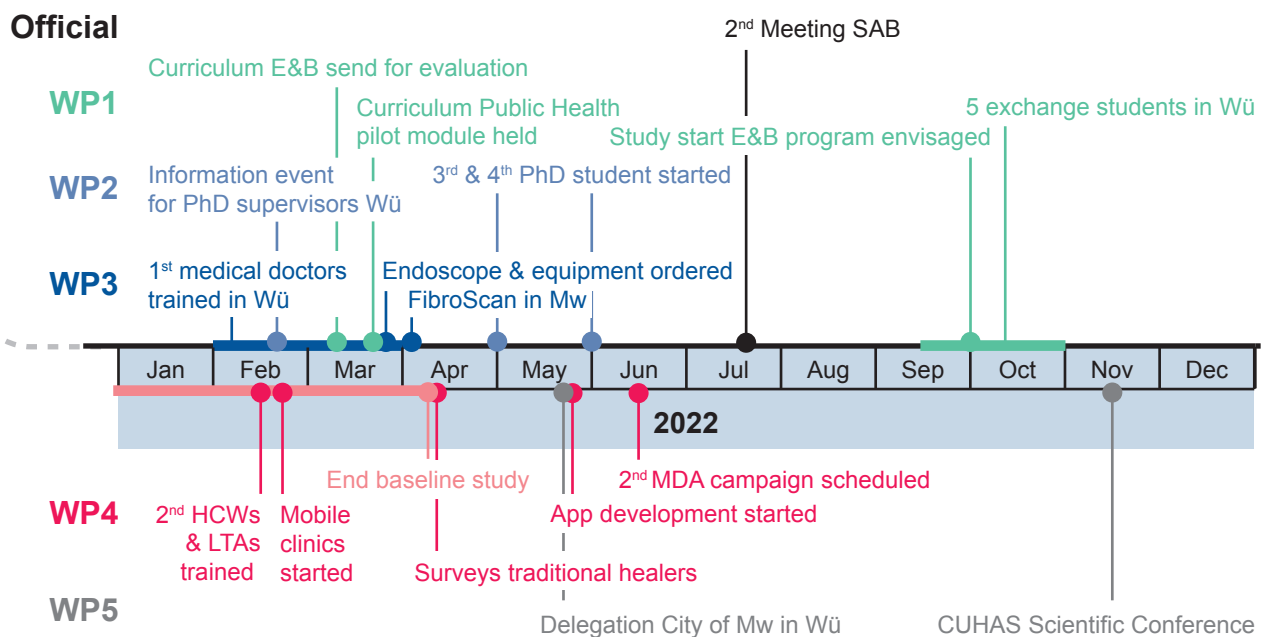
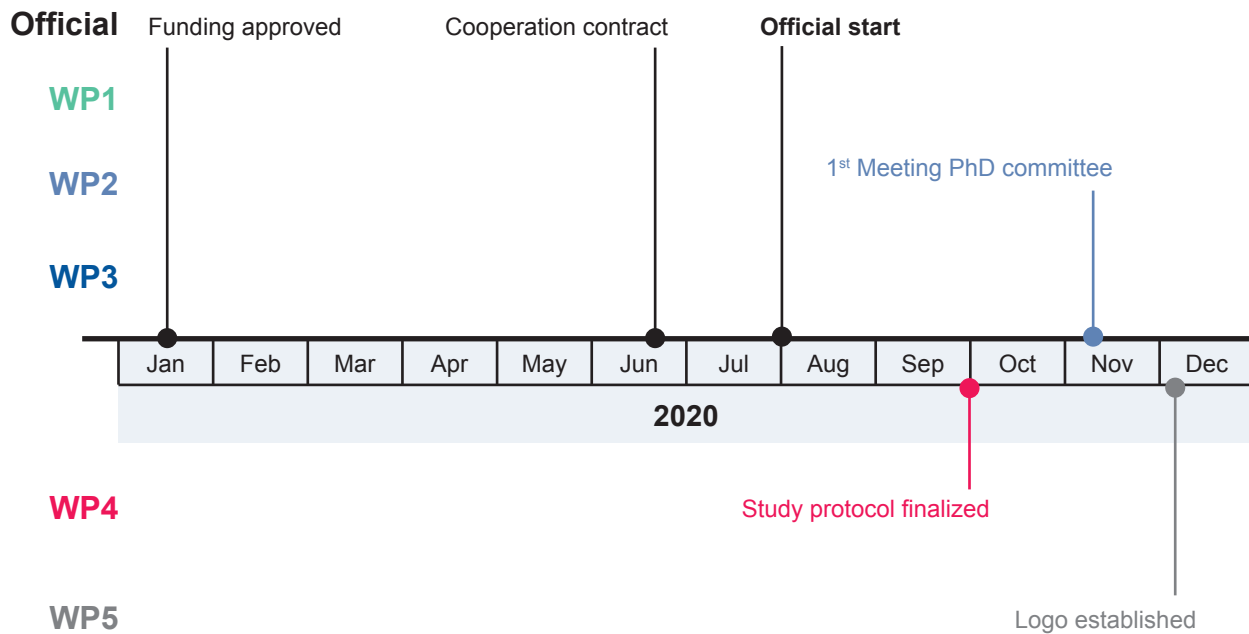
Prof. Paschalis Rugarabamu
Vice Chancellor, CUHAS
Mwanza, TZA

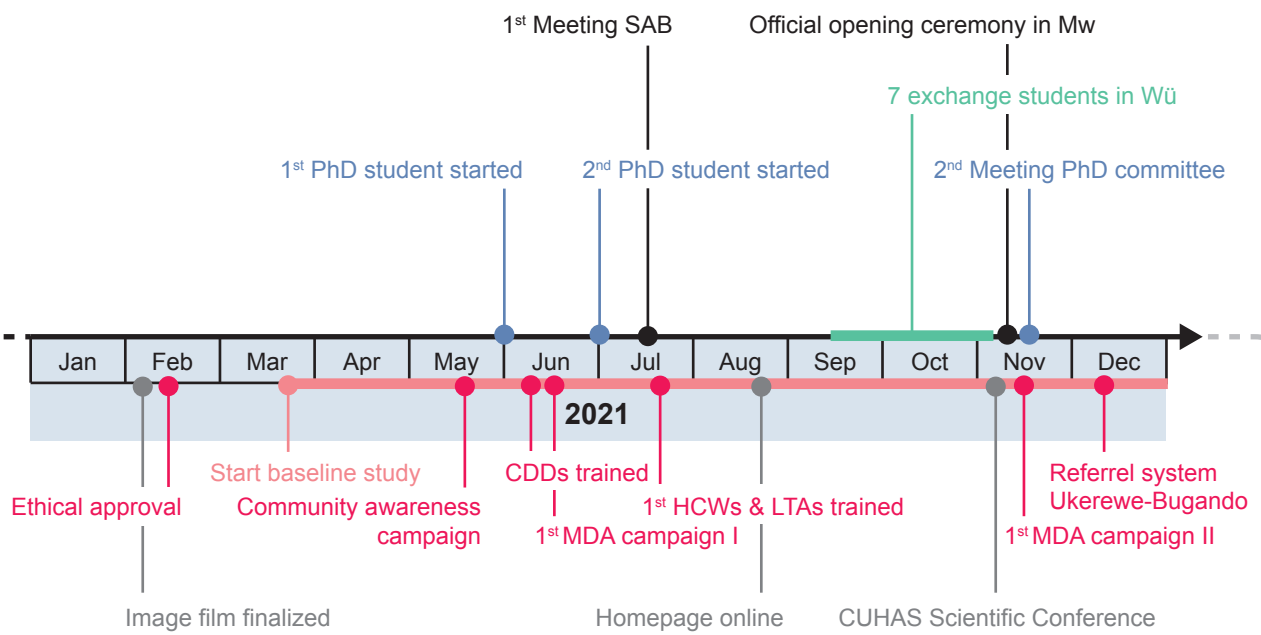


Mr. Shamez Sunderji
Head of Program, DAHW
TZA

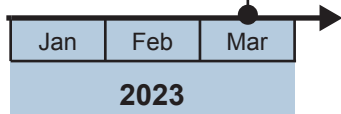
EKC TIMELINE

2020-2022





Mid-term evaluation



| | |
|------|------------------------------|
| Mw | Mwanza |
| Wü | Würzburg |
| E&B | Epidemiology & Biostatistics |
| LTAs | Lab Technical Assistants |
| CCDs | Community Drug Distributors |
| HCWs | Health Care Workers |
| MDA | Mass Drug Administration |

ABBREVIATIONS



Lake Victoria is a source of water and food but at the same time, coastal waters are contaminated with *Schistosoma*. Within Tanzania the Lake Victoria region has the highest prevalence of schistosomiasis in the country with infection rates up to 90% and more in rural communities living along the lakeshore and on the islands of Lake Victoria.



STUDENT EXCHANGE

WÜRZBURG <> MWANZA

MILESTONES

**MS1.1.1: Annual visit of
5 students from
CUHAS in Würzburg***

**MS1.1.2: Annual visit of
5 students from
JMU in Mwanza***

*to be completed each year

Building on the former loose student exchange program between the partner universities, the EKC established a **continous exchange** between the two sides including a **standardized application procedure**.

Due to the pandemic, the exchange activities were reduced in 2020 and 2021.

However, in 2021, 7 medical students could be funded by the EKC for a stay in Würzburg over 8 weeks and 2 exchange students from Würzburg could travel to Tanzania for a practical training of 2 months.

This year, 5 Tanzanian students will come to Würzburg and vice versa, 5 German students will visit the Bugando Medical Centre (BMC) in Mwanza.



Reunion of exchange students in Mwanza. © Anna Dittmar



Welcome of the first exchange students in Würzburg. © Michael Ullrich

| Year | 2020 | 2021 | 2022 |
|--|---------|---------|------------|
| Number of Exchange Students Mwanza > Würzburg | 0 | 7 | 5 |
| Duration of Stay | - | 8 weeks | 7 weeks |
| Number of Exchange Students Würzburg > Mwanza | 3 | 2 | 5 |
| Duration of Stay | 8 weeks | 8 weeks | 8-14 weeks |



While in Germany, medical students from BMC rotate between different departments of the University hospital in Würzburg based on the student's preference. As part of their studies, Würzburg students stay at BMC for 6 weeks two 3 months, where they are trained in a chosen field of expertise.

CURRICULA

MILESTONES

MS1.2.1: Analysis of requirements & content focus*

MS1.2.2: Curriculum established**

*year 1 / **year 3

Since early 2021, the EKC has pushed ahead with the development and design of **two joint master programs**:

Clinical Epidemiology & Biostatistics

In numerous virtual meetings between CHUAS and JMU, the requirements and the teaching content for the new master program in Clinical Epidemiology & Biostatistics were analysed and summarised in a bilateral curriculum. In March 2022, the curriculum was sent to the Tanzania Commission of Universities (TCU) for evaluation. After final adjustments and fine-tuning, a start of studies with about 10 students enrolled is envisaged for October 2022.

The online teaching activities of the lectures, tutorials, and assessments, as well as individual and practical trainings will be divided between academic staff of both universities and made accessible to students from both sides. While the courses will be integrated in the already existing master program Translational Medicine at JMU, a new program will be established at CUHAS.

Public Health

Going beyond the original proposal, the EKC also got involved in the re-design of the master program of Public Health at CUHAS. In cooperation with Würzburg, a stronger focus towards One Health will be elaborated for the MPH program. In March 2022, the first pilot module "One Health and Planetary Health" was given online. Further modules will follow in the second half of 2022.

While this collaboration offers the One Health expertise of JMU to CUHAS, it opens up fantastic opportunities for Würzburg students to conduct hands-on research projects with great practical relevance in Mwanza.

○ **2020**

Focus and content defined

○ **2021**

Detailed curriculum established,
including a range of teaching
modes and recruitment of
respective academic staff

○ **2022**

Curriculum sent to Tanzanian
Commission of Universities (TCU)

Fine-tuning according to
comments of TCU

Study start

AIM

Both programs aim for a **strong collaboration** between the students of both sides and will offer multiple **exchange possibilities** within research projects and summer/winter schools. Additionally, the final theses can be written at either location.





PHD PROGRAM

WÜRZBURG <> MWANZA

MILESTONES

MS2.1: Call for applications published*

MS2.2: Two PhD students working*

*year 1

PhD Fellows

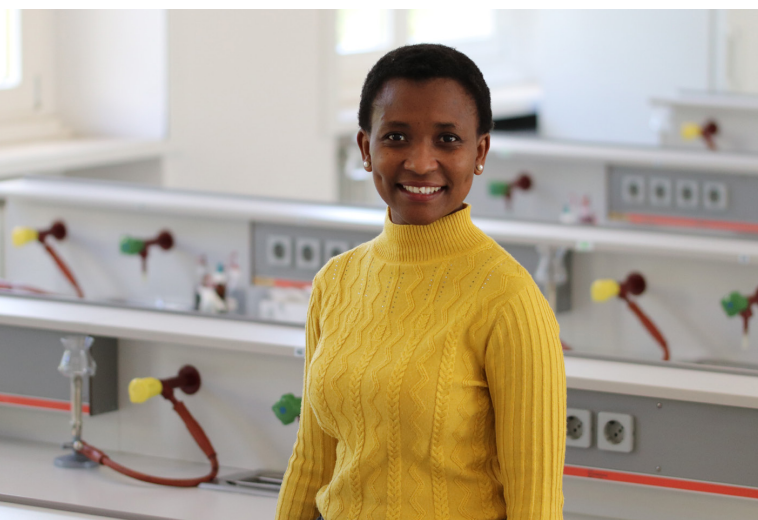
The EKC PhD program is structured as a bilateral funding program. Thus, all PhD candidates were nominated by a bilateral selection committee in a highly competitive process and are jointly supervised by experts from both sides. Within the EKC PhD program, the PhD fellows have the unique opportunity to conduct their research projects alternating between both locations.

In total, the EKC supports 5 PhD fellows for 4 years by covering for salary and travel expenses and providing an annual budget for consumables for each of the doctoral candidates.

PhD Associates

In addition to the EKC PhD fellows, the EKC also created the possibility to associate PhD students to the EKC (PhD associates). Four PhD associates are supported in their PhD at CUHAS / BMC. The EKC will provide them 1 or 2 research stays in Würzburg including travel expenses, daily allowances and accommodation for up to 12 months and a joint supervision from both sides.

Both, EKC PhD fellows and PhD associates also have the possibility to participate in training course within the JMU excellence Graduate School for Life Sciences, which they can choose freely from a large selection.



Delfina Msanga (left) came to Würzburg as the first EKC PhD fellow. Henerico Shimba (right) is currently enrolled in an online statistics course of the GSLS at the JMU as a PhD associate. © Franziska Pietsch, Christa Kasang



PHD FELLOWS 2021/22

| Name | Research area | Starting date | 1st stay in Würzburg |
|-----------------|---|---------------|----------------------|
| Delfina Msanga | Paediatrics/ Neonatal Sepsis | 06/2021 | 07/2021 – 12/2021 |
| Deodatus Mabula | Internal Medicine/ Diabetes Mellitus | 07/2021 | 08/2021 – 12/2021 |
| Nyanda Justine | Parasitology/ Schistosomiasis | 05/2022 | 07/2022 – 08/2022 |
| Erius Tebuka | Pathology/ Multiple Myeloma | 06/2022 | 09/2022 – 10/2022 |
| Mary Ndibalema | <i>tba</i> | <i>tba</i> | <i>tba</i> |

PHD ASSOCIATES 2021/22

| Name | Research area | Starting date | 1st stay in Würzburg |
|-----------------|--------------------------------------|---------------|----------------------|
| Vitus Silago | Bacteriology/ AMR | - | 07/2022 – 12/2022 |
| Helmut Nyawala | Virology/ HIV | - | 10/2022 – 03/2023 |
| Henerico Shimba | Virology/ COVID | - | 09/2022 – 10/2022 |
| Matiko Mwita | Psychiatry/Pregnancy & postpartum | - | 10/2022 – 12/2022 |

ADVANCING HEALTH & IMPROVING MEDICAL CARE

WÜRZBURG <> MWANZA

MILESTONES

MS3.1: Set up annual application procedure for medical exchange*

MS3.2: At least one Tanzanian participant stayed in Würzburg*

*year 2

As part of the EKC medical exchange program, two internists, Dr. Paulina Manyiri and Dr. Kwandu Mashuda were trained at partnering hospitals in Würzburg in the fields of echocardiography, gastroenterology, and hepatology from mid-January till end of March 2022 under the guidance of the resident senior physicians.

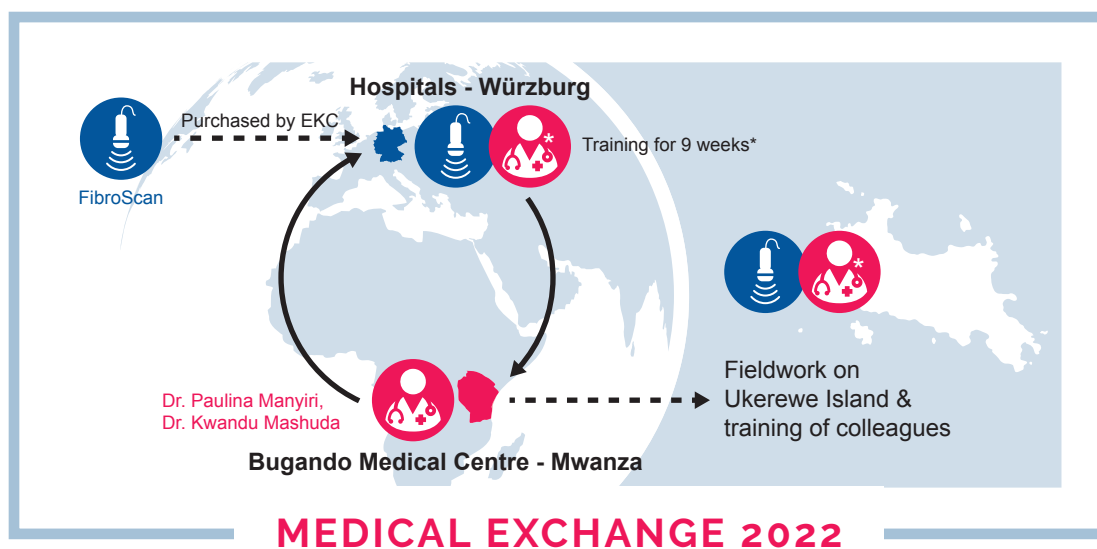
SCHEDULE MEDICAL EXCHANGE 01-03/2022

| | KWM Missioklinik Echocardiography | KWM Juliusstpital Gastroenterology | UKW Hepatology | UKW Gastroenterology |
|------------|--------------------------------------|---------------------------------------|---------------------|-------------------------|
| Supervisor | PD Dr. M. Held | PD Dr. A. Ignee | Prof. Dr. A. Geier | Prof. Dr. A. Meining |
| Week 1 | Dr. Paulina Manyiri | | | |
| Week 2 | Dr. Paulina Manyiri | Dr. Kwandu Mashuda | | |
| Week 3 | Dr. Paulina Manyiri | Dr. Kwandu Mashuda | | |
| Week 4 | Dr. Kwandu Mashuda | | Dr. Paulina Manyiri | |
| Week 5 | Dr. Kwandu Mashuda | | Dr. Paulina Manyiri | |
| Week 6 | | | Dr. Paulina Manyiri | Dr. Kwandu Mashuda |
| Week 7 | | Dr. Paulina Manyiri | Dr. Kwandu Mashuda | |
| Week 8 | | | Dr. Kwandu Mashuda | Dr. Paulina Manyiri |
| Week 9 | | | Dr. Kwandu Mashuda | Dr. Paulina Manyiri |



Left: Dr. Paulina Manyiri is trained on the FibroScan. Right: Farewell dinner after 9 weeks training in Würzburg
©Delfina Manyiri, Franziska Pietsch

The two doctors were amongst others also trained on a FibroScan device, which was purchased for the EKC and send to Mwanza by the end of the training visit. The device is now used on Ukerewe Island for screening the population of the island for liver damage caused by schistosomiasis in the context of EKC field activities.



To equip Nansio hospital, the local hospital on Ukerewe Island, with basic equipment for endoscopy of the upper digestive tract, the EKC also purchased three endoscopes and the corresponding accessories. All medical devices will be transported to Ukerewe Island. At the same time, medical doctors from Nansio Hospital will be trained in gastrocopy and rubber band ligation at BMC in Mwanza. This equipment and training will create the possibility of diagnostics and treatment of patients suffering of upper gastrointestinal bleeding due to schistosomiasis, and thus enable the Nansio hospital to carry out the necessary examinations and interventions on site.



The communities of Ukerewe Island (~240,000) depend almost exclusively on fishing for their livelihoods. Building medical capacities on Ukerewe Island is a major focus of the Else Kröner Center.



POPULATION BASED HEALTH CARE ACTIVITIES

WÜRZBURG <> MWANZA

MILESTONES

- MS4.1:** Training programs held for HCWs & LTAs*
- MS4.2:** Treatment campaigns for schistosomiasis/NTDs (MDA)*, including Test & Treat campaigns***
- MS4.3:** Development & distribution of manual & app-based clinical guidelines**
- MS4.4:** Annually remote chronic morbidity screening through mobile clinics**

*annually / ** year 2 or started in year 2 / ***in year 1, 3 & 5



Left: Training of Lab Technical Assistants (LTAs) at Nansio hospital on Ukerewe Island in February 2022. © Valence Nkulunga
Right: Prevalence survey on Ukerewe Island in April 2021. © Stella Mugassa



Medical camps on Ukerewe Island in February 2022. © Valence Nkulanga



ACHIEVEMENTS & ONGOING PROJECTS

In the first year, several meetings with district officials served to identify suitable study sites and to encourage government ownership and participation.

Following ethical approval of the study protocol, a comprehensive, mixed-methods baseline study was conducted to gain insight into the prevalence of schistosomiasis (between 70-98% prevalence in sentinel sites according to the point-of-care test), the level of health system capacity, and community members' perceptions and knowledge of the disease. These baselines serve as a basis to evaluate the impact of the Population-based Health Care Activities over time, as well as to optimize the interventions to address identified needs and gaps.

The first community-based mass drug administrations against schistosomiasis were successfully implemented on Ukerewe Island in year 1 and 2. To this end, intensive community sensitization campaigns were conducted, and community drug distributors (n=137) were trained, who act as the main players in the implementation of the treatment campaigns. In the first rounds of MDA, a total of 34,000 adult community members on Ukerewe Island and additional 9,500 adults in Ukara Island received the preventive treatment. Health workers (HCWs; n=90) and laboratory technical assistants (LTAs; n=20) were schooled in two training rounds on schistosomiasis, its diagnosis, treatment, and referral using the printed clinical guidelines manual (an e-health version will also be developed). Using portable ultrasound machines and experienced sonographers, mobile clinics were set up in the second year to regularly visit remote communities for early detection of chronic diseases related to schistosomiasis and referral to higher structures of the health system up to Bugando Medical Centre (BMC).



Test & Treat Campaign. Left: Patients are given medications by local health care workers or drug distributors. Right: Abdominal sonography of a patient for the diagnosis of schistosomiasis. © Sascha Montag, Stella Mugassa

OUTREACH & COMMUNICATION

WÜRZBURG <> MWANZA

MILESTONES

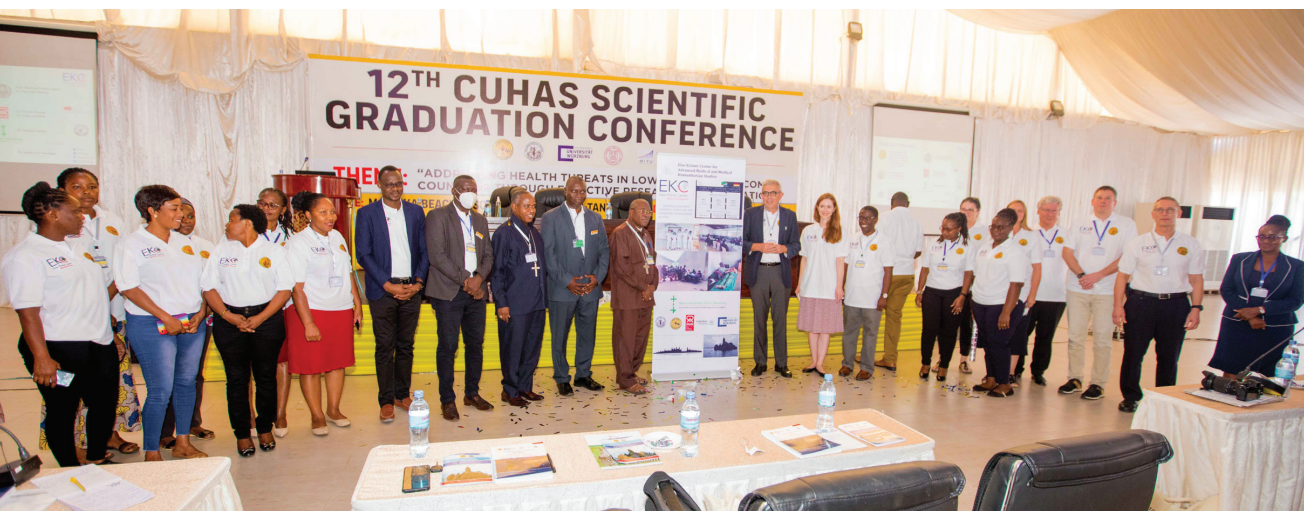
MS5.1.1: Management office set up at both sites*

MS5.1.2: Logo and communication strategy established*

*year 1 / **year 2

With the establishment of the EKC, a sustainable platform was created to help optimize the organization of the activities within the center and to link these activities at both sides. The full synergistic potential of the different projects is realised through the close and trustful cooperation between all partners.

In 2021, a corporate design (logo, etc.) was established for the EKC and the website (www.wuerzburg-mwanza.de) was launched. The continuously updated website informs partners, students, and other interested parties about the different EKC projects and programs.



Official opening of the EKC in Mwanza in 2021. © fx studio, Mwanza



The EKC members pay a visit to the clinic director of Nansio Hospital on Ukerewe Island. © Franziska Pietsch



Top: Guests from Würzburg actively participated at the CUHAS Scientific Conference 2021.

Bottom: Delegation from Mwanza City visiting the EKC in Würzburg in 2022. © fx studio, Mwanza & Gabriele Gerlach



PROJECT MANAGEMENT

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