

EKFS Center of Excellence in Non Communicable  
Diseases Management in Rural Uganda

# 2<sup>ND</sup> YEAR ANNUAL REPORT

---

Issue

**2**

30th September 2018

# CONTENT

3	Preface	18	Global Health Education
4	Executive Summary	19	Research fellows for EKFS project
5	Introduction		OUR STORIES
8	Building Capacities	22	Our People
10	WHO PEN II Protocol Training Workshop	24	Grassroots Champion Award 2018
12	Building a Network	26	EKFS support at ACCESS
13	NCD-training curriculum	28	Conference Calls
15	NCD census	29	Thank you!

## Message from the Principal Investigators

It gives us immense pleasure to share with you our progress during the second year of operations since we received a three-year grant support from your foundation. Non-communicable diseases remain a major cause of morbidity and mortality which mostly affects low income countries such as Uganda. Therefore, we are most grateful for the support we have received. This year's report summarizes the achievements of the ACCESS Uganda partnership with colleagues from Charité Universitätsmedizin

Berlin, Yale University, Johns Hopkins University and Makerere University.

We have been able to follow up the patients screened from the NCD survey in year 1 and have gone ahead to work with the Ministry of Health and Nakaseke Hospital to set up the first integrated Clinic for NCD care in the district.

Alongside, we have been able to train 20 community health workers as well as 27 Health professionals who have multiplied our impact in the community.

We thank the Else Kröner Fresenius-Stiftung for supporting this vision and contribute to efforts that have enabled us to reach out a great number of community members with health services.

Happy reading!!

*Felix Knauf  
Trishul Siddharthan  
Robert Kalyesubula*

From right to left:  
Dr. Robert Kalyesubula,  
Trishul Siddharthan,  
Prof Moses Kamya,  
Prof Felix Knauf, and  
Nora Anton

# EXECUTIVE SUMMARY

4

**T**he EKFS (Else Kröner-Fresenius Stiftung) medical-humanitarian funding was established in September 2016 in Nakaseke district of Uganda to promote patient-centered care for non-communicable diseases (NCDs), in order to foster the development of a Center of Excellence for NCDs in rural Uganda. A full report of our activities from September 2017 to September 2018 has been compiled and presented separately.

Major events in the past year have been the training of 27 health care workers (HCWs); establishment of a rural NCD clinic at Nakaseke General Hospital; development of NCD charts approved by the Uganda Ministry of Health (MoH); training of 20 Community Health Workers (CHWs); integration of CHW model into NCD care program; testing the feasibility of NCD PocketDoktor booklets on 100 selected participants with NCDs in Nakaseke.

We have developed, translated and field-tested PocketDoktor booklets for hypertension, diabetes mellitus and chronic kidney disease. We currently provide chronic care to over 300 patients through the newly established NCD clinics at Nakaseke and Life care center. We have trained 7 students in global health from Uganda, USA and Germany. We set up the NCD fellowship program in collaboration with the Uganda Ministry of Health and our first candidate is finishing in this year.

We continue to offer scholarships to nursing students with 3 new candidates selected for the awards.

As a way of reaching out to the community, we have adopted this CHW model to disseminate NCD-related health education, screen for NCDs and refer community members diagnosed with NCDs to Nakaseke NCD clinic and ACCESS life care center. In addition, the program has also strengthened NCD global health education component through supporting both local and international fellows.

Recently we hosted three medical students from Makerere University College of Health Sciences through Makerere University-Yale University collaboration (MUYU) programme. We also hosted one student from Yale School of Medicine, USA and one student from Germany..



# INTRODUCTION

5

**T**he Rural NCD project is a strategic initiative designed to establish a center of excellence in the care and management of non-communicable diseases in rural Uganda. We envision enhanced clinical capacities and improved patient-centered care for NCDs in rural Uganda; improved knowledge on feasibility and effectiveness of patient-centered care in resource-limited settings and promoting collaborative global health training platforms for local scholars with interest in NCD health.

Our goal is to contribute to the realization of this vision in rural Uganda.

Since its inception in September 2016, our work has progressed in three main themes:

- 1.Enhancing clinical capacities and establishing patient-centered care for NCDs.
- 2.Improving knowledge on the feasibility and effectiveness of patient-centered care.

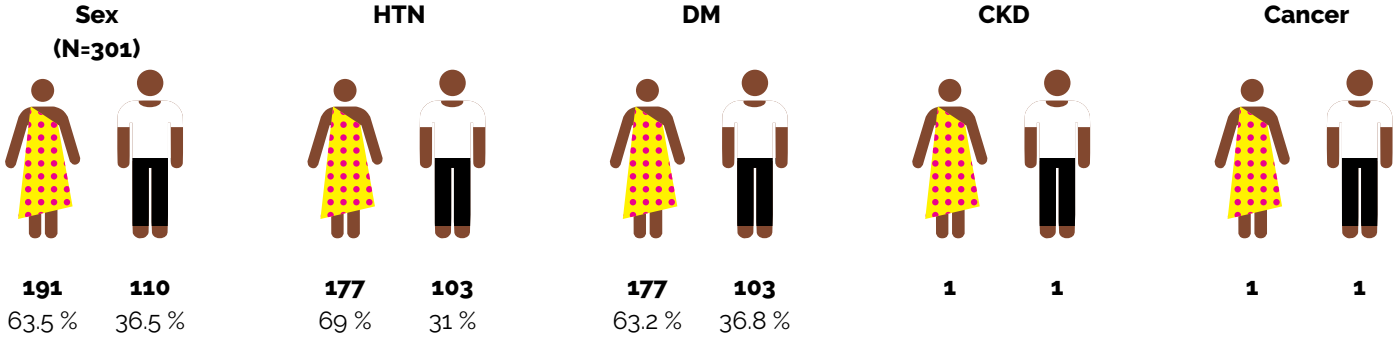
3.Global Health Education. In this document we provide an update using the three theme headings, with particular attention to the work that has been accomplished in the second year of the programme.

Enhancing clinical capacities and establishing patient-centered care for NCDs



Patients at the NCD Clinic funded through EKFS awaiting to be seen by the health workers.

Clinical characteristics of patients recruited from NCD clinic



Improving infrastructure, transport and medical equipment at ACCESS for district-wide NCD health management:

In addition to the achievement of obtaining a vehicle for the programme in the first year, we have been able to establish ACCESS-EKFS-Nakaseke NCD clinic at Nakaseke General Hospital. The clinic runs every Friday of the week by a qualified programme physician who is employed fulltime thanks to the EKFS funding to see NCD patients. He is supported by a team of nurses who were trained to use WHO pen protocol.

In addition, to simplify data collection in the clinic, the programme developed patient NCD charts which were approved by the Uganda Ministry of Health (MoH). The clinic officially opened in January 2018. Since then, we have been able to attend to over 300 NCD patients. the ACCESS Nursing school while 46 community healthworkers have been trained and commissioned to support the community.

The third strategic pillar is about economic empowerment where the target beneficiaries are the elderly and adolescent youth who are provided with small start-up grants to generate income for sustainable improvements in their lives.

Developing Luganda Pocket Doktor tools for management of HTN, DM and CKD:

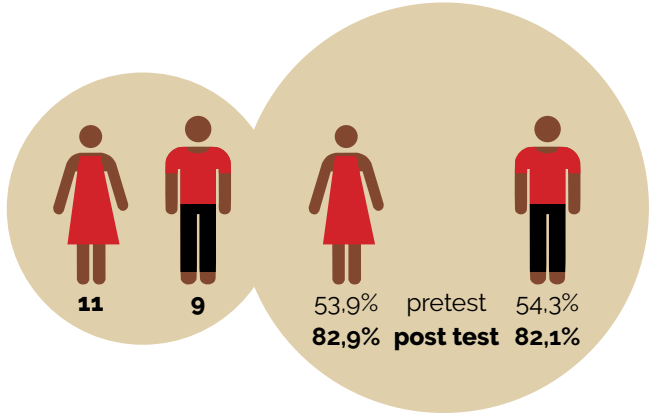
Luganda is the language spoken in the district of Nakaseke. In the second year of the programme PocketDoktor booklets in the language Luganda were developed, reviewed by experts in NCDs and tested on NCD patients at Nakaseke NCD clinic. A total of 200 copies of PocketDoktor booklets for hypertension, diabetes mellitus and kidney disease have been printed in Luganda version.

These booklets are currently being distributed to patients attending the Nakaseke NCD clinic.





Ms. Faith Nassali listens to a CHW consent another CHW during role plays



The number of CHWs who attended the workshop (left) and percentage gain in knowledge of CHWs about NCD care and management (right)..

### Community Health Worker Training Workshop:

Over 20 CHWs (55% Male, 45% Female) were trained in NCD care and management. This was a three-day workshop which took place at ACCESS life care center in Nakaseke from Wednesday 30th May to Friday 1st June 2018. The main objective of the workshop was to train CHWs in NCD management and equip them with basic research skills. We selected 20 CHWs from rural communities of Nakaseke.

The training followed two main modules. In module 1, we provided trainees with knowledge and skills required to teach the community on the significance of change in life style in prevention and control of Diabetes, Hypertension and Chronic Kidney Disease. In addition, we provided trainees with knowledge and skills required to detect NCDs.

In module 2, we provided trainees with knowledge about NCD health promotion and education. We conducted pre- and post-workshop assessments to document gain in knowledge about NCDs.



The CHW Training Workshop with the Modules 1 & 2



Nakaseke Hospital nurses taking pre-workshop test



Dr Ben Bodnar and Dr. Munana Richard conducting the HEARTS protocol training at Nakaseke hospital

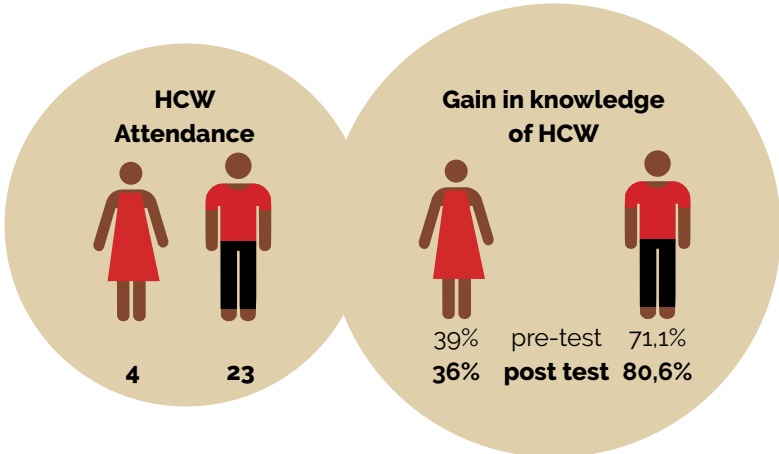


Nakaseke Hospital staff taking a post-workshop test

WHO PEN II Protocol Training Workshop

We conducted a two-day WHO pen II protocol training workshop at Nakaseke General Hospital from 8th to 9th February 2018. The main objective of the training was to train nurses, clinical officers and Medical officers into HEARTS, a technical package for cardiovascular disease management in primary health care. Over 27 participants from ACCESS NCD clinic and ACCESS-EKFS-Nakaseke hospital NCD clinic attended the training.

The workshop was moderated by Dr. Benjamin Bodnar from Johns Hopkins University, an expert in the field of NCDs. He was assisted by Dr. Richard Munana from ACCESS, Nakaseke.



The pie chart represents the number of health care workers who attended the HEARTS protocol training. The bar graph shows the gain in knowledge of participants after being trained in the use of the HEARTS protocol.

One of our trained CHW (left) teaching about hypertension to a client (right) using pocket doktor booklet for hypertension.



Building a network of Community Health Workers in Nakaseke district

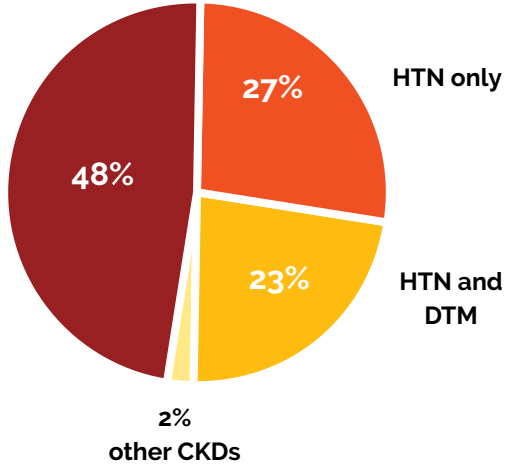
A network of 20 well trained and competent CHWs who have been utilized to conduct NCD patient education using PocketDoktor booklets for hypertension, diabetes mellitus and kidney disease at ACCESS-EKFS-Nakaseke NCD clinic. Our CHW team has been able to reach out to 100 patients diagnosed with selected NCDs as illustrated in the graph below.

These selected patients have been followed-up on a monthly basis to monitor their hard outcomes like blood pressure profiles in order to assess for control. We have employed this model to design a community base programme through which our team of CHWs will conduct NCD patient education, screening and referral of patients to ACCESS-EKFS-Nakaseke NCD clinic for NCD management by our physicians.

The NCD-training curriculum for Community Healthy Workers:

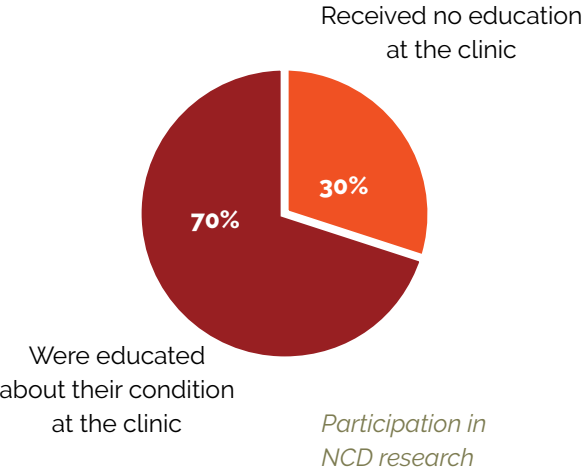
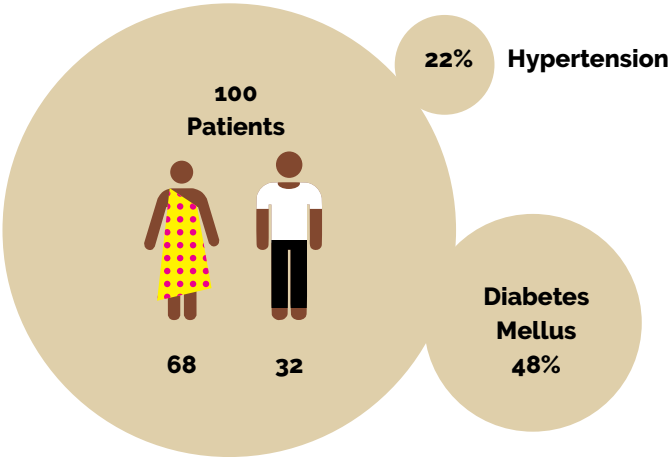
With support from EKFS, our programme developed an NCD curriculum. It consists of two modules i.e. NCD prevention and control (module 1), a taught course for seven and half hours and health promotion and education (module 2) a, taught course for 20 hours. The curriculum is designed to provide VHTs with basic understanding of NCDs, increase capacity for disease surveillance, prevention, management and control at the community level, train CHWs into the use

of NCDs screening tools and to acquire health promotion and education skills. The curriculum targets candidates who are citizens of either Nakaseke Town Council, Kasangombe Sub County or Nakaseke Sub County, are willing to work in these sub counties, are 18-40 years old, have a minimum qualification of Uganda Certificate of Education (ordinary level) and are able to communicate in both local language (Luganda) and English. On completion of the basic training, the successful CHWs is awarded



Selected NCDs at the clinic





Theme 2: Improving knowledge on the feasibility and effectiveness of patient-centered care

Since August 2018, we have been conducting a prospective cohort study designed to run for 6 months. In this study, we are implementing and evaluating the impact of a validated patient-centered education tool (PocketDoktor booklets) among 100 patients diagnosed with hypertension and/or diabetes in a rural outpatient setup of Nakaseke NCD clinic.

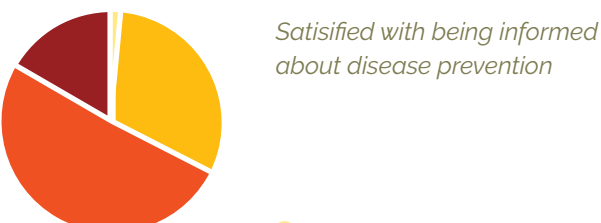
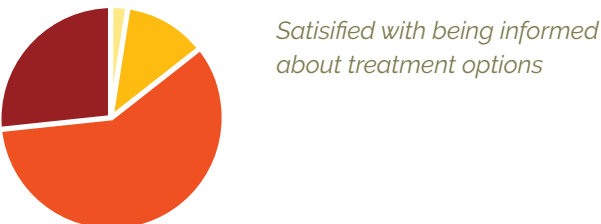
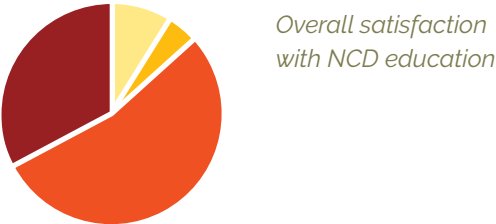
The PocketDoktor booklets are being administered by our team of trained CHWs on these selected patients. Our study outcomes include patient satisfaction measured by patient activation measure (using PAM-13 tool) and health outcomes measured by hard outcomes such as systolic and diastolic blood pressure. We have recruited 100 patients (68% females) diagnosed with either hypertension (22%) or diabetes mellitus (48%).

We administered a PAM-13 questionnaire at baseline and measured clinical and sociodemographic characteristics of these individuals. In three months time post recruitment, we will assess the PAM-13 score and clinical parameters like blood pressure in these individuals to determine if there has been any impact by our intervention.

Publishing NCD Community Census conducted during year 1

We have been able to complete one manuscript from the NCD census which was conducted in year 1 of the programme. The manuscript is titled "The Rural Uganda Non-Communicable Disease (RUNCD) Study: design, methods, and self-reported disease". In this write up, we have described a rural cohort of individuals with self-reported NCDs. We have presented the establishment of the RUNCD study in response to the epidemic of NCDs in low- and middle-income countries and the

acknowledgment that existing studies provide an incomplete understanding of the burden of NCDs. We demonstrated successful enrollment of 16,272 rural Ugandan residents at a response rate of 99.2%. And these participants were systematically captured from three sub-counties of the larger Nakaseke Health District representative of the Ugandan rural setting.



- Extremely dissatisfied
- Moderately dissatisfied
- Moderately satisfied
- Extremely satisfied





*Community Health Workers posing a question to global health students from Makerere University.*

# GLOBAL HEALTH EDUCATION

# GLOBAL HEALTH EDUCATION

# FELLOWS FROM UGANDA

**W**e successfully hosted two female and two male 4th year medical students from Makerere University College of Health Sciences for a three days placement. The main objective of the visit was to expose these selected students to research opportunities in NCDs at ACCESS and familiarize them with community based solutions to medical care.

The students appreciated our CHW model in delivering NCD care at Nakaseke hospital, participated in patient care through bedside teachings and ward rounds. At the end of the visit, students had a general picture of NCD management program at ACCESS, the role Community Health Workers (CHWs) and the community in championing NCDs care and management.

**O**ur program recruited Dr. Richard Munana, a fulltime research fellow based at ACCESS Uganda and mentored by experts in the field of NCDs from Johns Hopkins University, USA. His dream is to become a master of protocol driven care of NCDs in rural Ugandan settings like Nakaseke. He has played a critical role in the establishment of the Nakaseke NCD clinic. He runs the clinic every Friday screening and treating for NCDs.

He has been key in documenting patients seen at the clinic. He has established a database of patients with NCDs. Currently, his research area focuses on the implementation and assessment of the impact of the WHO HEARTS protocol among hypertensive and diabetic patients of rural communities of Nakaseke. Briefly, the HEARTS protocol is a technical package for cardiovascular disease management and care in the community, hospitals and by low level health

care cadres. It consists of modules developed under the auspices of the Global Hearts Initiative, led by WHO and the US Centers for Disease Control and Prevention. The fellow has participated in the initial training of 18 nurses at Nakaseke General Hospital with the Johns Hopkins NCD expert on the use of the HEARTS protocol in NCD care. He has further developed a protocol to assess the level of awareness and fidelity to implementation of WHO HEARTS protocol

in rural settings, the impact of WHO HEARTS protocol driven care for hypertension and diabetes on patient outcomes and the barriers and enablers to implementing protocol based non-communicable disease care. We hope that during the 3rd year of the programme, our fellow will gain a deeper appreciation of the HEARTS protocol and its impact on the rural community.

*Richard Munana*



*Dr Munana Richard attending to a patient at the NCD clinic*

## Research fellows for EKFS project



*Dr. Kast shares a light while attending to a client in the NCD clinic*



*Theresa takes the CHWs through diabetes and the diabetic booklet during the CHW training.*

# FELLOWS FROM GERMANY

**W**e hosted Dr. Katarina Kast, one of the team members on the EKFS project based in Germany for a week's rotation from 19th-24th February. The main aim of her visit was to get acquainted with the works of ACCESS and explore possible areas of future collaborations. During her visit, she was part of various ACCESS activities such as visiting some of the Health Centers that ACCESS works hand in hand with to extend reproductive health services in Nakaseke.

In addition, she visited Global Health Uganda, which currently assists in the ACCESS-EKFS NCD center of excellence. Dr. Kast received various HEARTS materials and the Uganda clinical guidelines. On 23rd February 2018, she ran the Nakaseke hospital based NCD clinic and gave a teaching to global health students Jamon and Stephanie from Touro University, USA.

**T**heresa is a German medical student that visited ACCESS for a four weeks' period. During her stay at ACCESS, she rotated with four other global health students from the USA. She received various lectures in NCDs, tropical medicine and reproductive health. These were provided by the team at ACCESS and Nakaseke hospital. She also received training in HEARTS materials and was involved in caring for the NCD patients in both the Nakaseke based and ACCESS based NCD clinics.

She interacted with the EKFS Yale sponsored students who visited ACCESS during her rotation. She participated in the training of the NCD CHWs that took place at the ACCESS premises in Nakaseke.





# OUR STORIES



# OUR PEOPLE



**Miss Estherloy Katali**

She is the managing director of ACCESS since January 2018. She has been keen in supporting implementation the EKFS-NCD program activities and overseeing the overall management of

the program. In addition, she has been key in coordinating visiting fellows at ACCESS. Estherloy earned her Master's Degree in Computer Technology at Makerere University.



**James Ssewanyana**

He is a clinical officer by training, co-founder and deputy executive Director of ACCESS Uganda. He is known in Nakaseke as Musawo (doctor).

He lives and works with ACCESS in Nakaseke. James serves as the primary clinician at Life Care Center, and oversees ACCESS programs in Nakaseke.



**Alex Kayongo**

He is a postgraduate research fellow serving as a research scientist under the EKFS funded Center of Excellence for NCDs in Nakaseke district.

He is a medical doctor and currently a master's student in Immunology and Clinical Microbiology at Makerere University College of Health sciences. His passion is to understand the interaction between NCDs and HIV in rural Uganda. He has been very key in designing and implementing protocols in the program including hospital and community components of the PocketDoktor study. He has also played a key role in teaching visiting fellows from Germany and the United states.



**Mrs. Faith Nassali**

our NCD Project Coordinator, who is currently pursuing a Master's degree in Public Health at Makerere University School of Public Health. She has played a significant role in implementing the

NCD project. Faith has been key in organizing protocol training sessions, good clinical practice (GCP), protection of human research participants (PHRP) workshops for Community Health Workers (CHWs) implementing the PocketDoktor study. In addition, she has been conducting quality assurance (QA) sessions for the project, holding monthly meetings with CHWs to go over SOPs for the project. She has also assisted in preparing monetary reports and working on requisitions to ensure smooth running the program activities.



**Kyanzi Taddeo**

Meet Mr. Kyanzi Taddeo, the driver for the EKFS-ACCESS NCD program. He has been key in ensuring that our staff are transported for outreach programs.

He has also been helpful in picking and dropping off visiting scientists from the airport.

**Dr. Robert Kalyesubula —  
Winner of the 2018 Grassroots  
Champion Award!**



# OUR HONOR

**T**he Segal Family Foundation believes in a world where development is steered by grassroots leaders and power is shifted into the hands of communities.

The Foundation works across Sub-Saharan Africa and strive to be true partners to our grantees. They want to change the power dynamics inherent in traditional philanthropy and prove that a new, more equitable, and responsive approach is not only more fair, but more effective.

They are building an equitable community of visionary organizations—both doers and donors—across Sub-Saharan Africa so that together they can improve the lives of millions.

Outstanding leaders are at the helm of the exemplary partner organizations. Each year the Segal Family Foundation recognize these hard-working leaders during their Annual Meeting.

**“H**e’s a doctor, a senior lecturer, a PhD candidate, and the founder of our partner African Community Center for Social-Sustainability (ACCESS). And now he’s the winner of our 2018 Grassroots Champion Award!

Please congratulate Dr. Robert Kalyesubula, who has maintained deep connections with his community in Uganda through establishing a nursing school, a clinic, and a network of community health workers, as well as supporting orphans and vulnerable children through scholarships.”

Hope of a heart diseased patient restored through generous holistic care and support by Else Kröner-Fresenius-Stiftung.



Musawo Sewannyana assessing Janet.  
Photo taken with Janet's permission

## SHARING THE IMPACT OF EKFS SUPPORT AT ACCESS

Meet Janet, a 65 year old female peasant from Kyanika Bamunanika in Luwero. She was diagnosed with high blood pressure 5 years ago. Despite the effort to look for blood pressure medications from different health Centers in Nakaseke and medical camps, sometimes she could go without taking any medications to control her blood pressure. Six months ago, adding to the already complicated health of Janet, she developed relentless on and off fevers and joint pains which she initially thought was malaria. Musawo Ssewanyana, a health care worker based at ACCESS NCD clinic and trained in HEARTS

protocol received Janet and assessed her condition. He found out that Janet's condition was indeed more than hypertension and malaria. "Janet had a low grade fever" he reported. What was astonishing was a finding of a systolic murmur and an irregular heartbeat. Musawo Sewannyana measured her blood pressure and random blood glucose which he found at 140/80 and 6.5mg/dl respectively. He also measured her weight, height and waist circumference. With the newly developed NCD charts at the clinic, Musawo Ssewanyana was able to perform a relevant assessment of the patient.

In addition he performed an ECG which revealed atrial fibrillation, a heart rhythm disorder affecting the upper chambers of the heart and left ventricular hypertrophy. He wasn't in position to do further tests given the lack of capacity at the clinic. He instead instituted treatment for high blood pressure, gave an antibiotic and counselled the patient on healthy lifestyle including reduction on salt intake. Janet has been attending care at ACCESS for the last six months. She reports that her general health has improved significantly thanks to the care at the NCD clinic.

Four of five people who die from CVD are killed by either a heart attack or a stroke according to World Health Organization. When the community is empowered through taking charge of their health, the impact can be enormous. This story illustrates how learning and putting into practice skills of assessing patients with suspected cardiovascular diseases (CVD) by lower health care workers can have long lasting impact on the health status of peasants who can not afford care from tertiary centers or highly specialized personnel (cardiologists).

Many thanks to Else Kröner-Fresenius-Stiftung which sponsored the pilot phase of the HEARTS protocol training in 2017 at Nakaseke General Hospital. Through continued support, we plan on continuing with the HEARTS training targeting low cadre health workers and Village health Team (VHTs) to increase awareness of CVD in the community.

We hope that our efforts will curb the raising prevalence of CVDs in rural communities of Nakaseke. Let us all work together to achieve the 25 by 25 goal of reducing premature mortality from NCDs by 25% by 2025.



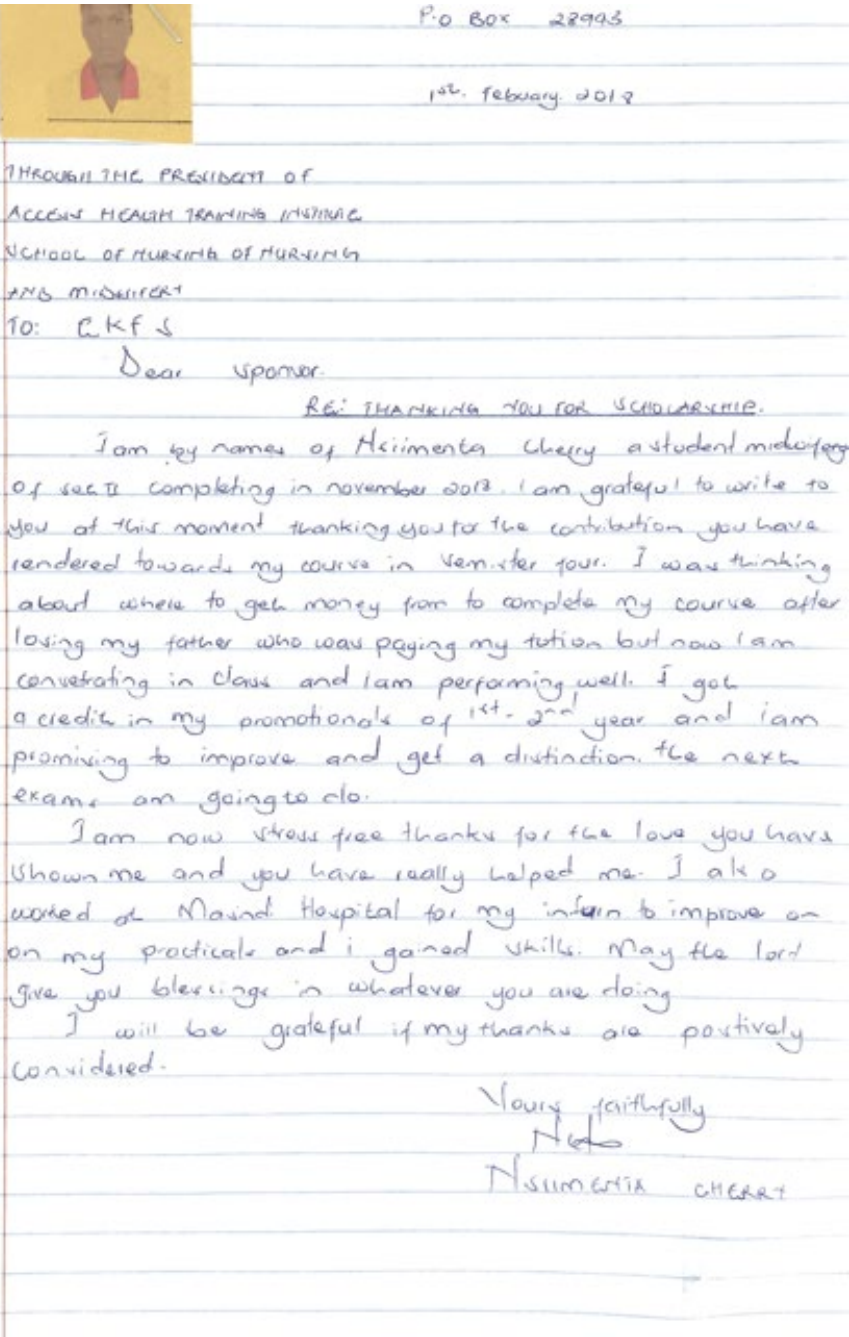
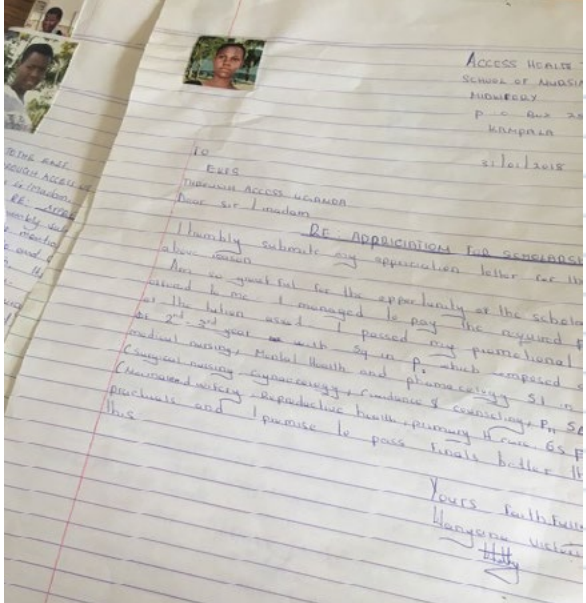
# CONFERENCE CALLS FOR CAPACITY BUILDING

To monitor project progress and increase rigor of the program, we have been having two-weekly conference calls attended by the project principal investigators from Germany, USA and Uganda, the implementation team in Uganda comprised of the program director, administrator, and research fellows.

During these conferences, we discuss weekly updates from the assigned team, troubleshoot challenges faced during implementation, go through data collected from our current research projects, discuss possible publications and grant applications to continue supporting the program.

Design: Helmut Kraus, helm69.com

# THANK YOU!







[www.accessuganda.org](http://www.accessuganda.org)