



Editorial

Dear Readers,

Welcome to the June 2021 issue of THRIVE News, a publication of the THRIVE consortium. This is a time when Uganda and Kenya are struggling to cope with severe phase two of the global COVID-19 pandemic. Both countries are experiencing rapid spread of SARS-CoV-2 among young people leading to symptomatic and more severe disease than before. The pandemic has disrupted ways of life they had always taken for granted, negatively impacted their education and their mental health and wellbeing. To fully understand their lived experiences during the pandemic requires involving them as much as possible in the entire research cycle of COVID-19 related projects.

Unfortunately, the role of young people in research in general has received relatively little attention in Africa. They have strengths which have been little explored and yet would otherwise enrich the research and also the optimization of its impact on communities. In this issue two articles focus attention on this conundrum and help to shine a light on this relatively neglected area. For the last five years THRIVE has encouraged and supported its doctoral and post-doctoral fellows to engage school children in research. This approach is aimed at producing a cadre of next generation researchers who value the role of public engagement in research and more so are enthusiastic about including young people on their research teams.

There is good reason to believe that THRIVE's approach has great value and bodes well for research in Africa during the remainder of the 21st century.

COVID-19's mental health fatigue – An expert's view

By Dr. Alinaitwe Racheal (MBChB, MMed (Psych))

Mental ill-health is a global concern with depression being the second leading cause of years lived with disability. It is estimated that at least 1 in every 4 Ugandans has some form of mental disorder. Mental illness can begin at any age, from childhood through later adult years, though most cases begin earlier in life.

Mental disorders affect one's productivity and functionality hence making it difficult for affected persons to fulfill their different responsibilities in society. The increased morbidity caused by mental disorders greatly affects the quality of life of the sufferer. Mental disorders are defined as disorders that affect one's mood, emotions, thinking and behaviors. The commonest of these include depression, anxiety, alcohol and substance use disorders, bipolar affective disorder and psychoses.

There are no distinct causes of mental health disorders but it is believed that mental illness can be due to genetic or environmental causes or a combination of these. A mental illness develops as a result of interaction of biological, psychological and social factors as illustrated in fig.1 below. Common environmental factors include; adverse events such as loss of dear ones, physical illnesses, trauma of all kinds, work related stress, marital discord and broken families and alcohol and substance use.



Dr. Alinaitwe Racheal



Figure 1: psychological, biological and social interactions for mental health

Other risk factors that increase ones' chances of developing a mental illness include: Stressful life situations, such as financial problems, a loved one's death or a divorce; use of alcohol or substances; a childhood history of abuse or neglect; traumatic experiences, such as military

combat

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Open day ... from Pg. 1 or assault, sexual assault; lack of social support and a chronic medical condition, such as diabetes or stroke.

Children and mental health



Children are not immune to mental illnesses as many people assume. The commonest disorders in children include neurodevelopmental disorders such as autism spectrum disorders, attention deficit hyperactivity disorder and Intellectual disability; learning disorders, behavioral disorders such as conduct disorder and oppositional defiant disorder; anxieties and attachment disorders. Predisposing risk factors stretch from intrauterine life to early childhood including pregnancy complications, maternal mental health, parental conflicts and child abuse among others. Some of these disorders are carried on into adolescence. Hence, adolescents have a share of both childhood disorders and adulthood disorders such as depression, anxiety, psychoses and substance abuse.

COVID-19 related mental health burdens

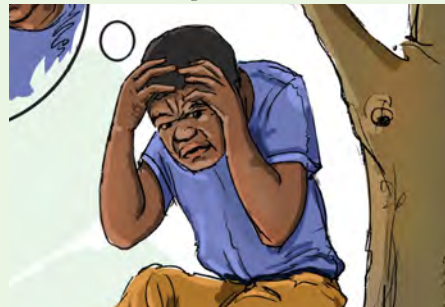


Difficult times like epidemics and pandemics also are risk factors for mental illness. There has been a spike in mental disorders in this COVID-19 era because of increased uncertainty as a result of the pandemic. There is uncertainty pertaining almost all spheres of life including schooling and job situations. Ironically, the measures put in place to control the disease's spread are recipe for mental illness.

Stress during this pandemic is related to: fear of being infected by a deadly disease or infecting loved ones with the disease; limited access to services (health, religious, entertainment, etc); Restricted/limited physical movement; lack of basic needs due to lock down measures; job losses, contradicting information and rumors regarding the pandemic and broken social

networks hence limited social support. Also, due to the control measures imposed, many mental health patients are unable to access care in a timely fashion hence relapse and worsening of their illness. The worsening of their symptoms puts them in harm's way with the enforcers of the COVID-19 protective guidelines as the patients are most times mistaken for criminals and wrong doers in society. There have been multiple cases reported of suicide, self-harm and homicide due to inability to cope with the tough social and economic times in this pandemic. The most vulnerable populations for mental illness during this pandemic are the health workers who not only work long hours but are exposed to traumatic experiences of COVID-19 victims, children who may be separated from families and care takers.

As a result of COVID-19, many mental health units in Government facilities have been converted into Covid treatment centers leaving the mentally ill with either sub-optimal care or no care at all. Most mental health units are now providing only outpatient care services due to lack of space and capacity to admit the severely ill. The severely ill are advised to seek for care from the National referral mental hospital which is also operating beyond its capacity given the increased number of mental complications as a result of COVID-19. Most of these patients and their families cannot afford transport to the national referral because the transport fares have more than doubled hence patients are physically restrained with ropes within their homes.



Symptoms of mental illness

Signs and symptoms of mental illness vary depending on the disorder one has. However, common symptoms include: feeling sad, difficulties with concentration, excessive fears or worries, extreme feelings of guilt, extreme mood changes, isolation from friends and activities, significant tiredness, low energy or problems sleeping, detachment from reality (delusions) and paranoia or hallucinations. Others are: inability to cope with daily problems or stress, major changes in eating habits, sex drive changes, feeling suicidal or homicidal, trouble understanding and relating to situations and to people, problems with

alcohol or drug use, excessive anger and hostility or violence

However, sometimes, especially in children and adolescents, symptoms of a mental health disorder appear as physical problems such as on and off stomach pain, back pain, headaches, or other unexplained aches and pains.

Nonetheless, despite the high burden of mental disorders in the country in light of the current pandemic, little attention or priority has been given to mental health. The challenges of mental health services are enormous ranging from inadequate funding (mental health receives only 5% of the already meagre health budget), to low staffing with overwhelming number of patients. The country has about 55 psychiatrists which translates into a psychiatrist- patient ratio of 1:1,000,000 for the country. There is need for more funding towards mental health so that there is better service provision, enhanced training of mental health professional and more research in mental health.

Nipping Mental Illness in the bud

Did you know that mental illness is a leading cause of disability? Suffice to note that untreated mental illness can cause severe emotional, behavioral and physical health problems. Complications sometimes linked to mental illness include: poor quality of life, family conflicts and other relationship difficulties, social isolation, problems with alcohol and substances, reduced productivity at work, school and in the community, legal and financial problems, poverty and homelessness, self-harm, harm to others and a weakened immune system hence predisposing one to other physical illnesses.

To prevent the above complications, it is necessary for people to pay attention to their mental health and that of their loved ones. Seek for help early when you see changes in your (or loved ones') behavior and functioning. One needs to seek help from the nearest health facilities which can provide the mental health care to refer to mental health experts.

There's no singular way to prevent mental illness. However, people have to control stress; balance work and leisure; learn positive coping skills; talk to someone about one's stressors; pay attention to warning signs such as changes in sleep, appetite and motivation; seek early medical care and take good care of yourself (sufficient sleep, healthy eating and regular physical activity are important).

Mental health issues affect everyone and are a health concern in this country, more especially during the COVID-19 pandemic. There is great need to prioritize mental health and increase funding to this vital health sector.

How the THRiVE postdoc experience has enhanced my research career

Eddie M Wampande –Thrive-2 post- doctorate

In 2017, I was fortunate to be enrolled as post doctorate fellow under the THRiVE-2 DELTAS training program. The program engaged me as a scholar in a temporary and defined period of mentored advanced training to enhance my research and research independence skills needed to pursue an independent research career path. Under this framework, I received quality supervision, career mentoring lessons, skills on establishing collaborative networking and ways of nurturing research environment. In spite of all that, it has been a challenge in realizing independence in research despite all odds at play. Among the ground breaking achievement following my post –doc training was when I was requested to head a diagnostic and research laboratory (Fig 1) at Makerere University’s College of Veterinary Medicine, Animal Resources and Bio-security (COVAB).



Fig 1: Dr. Wampande in the Diagnostic and Research laboratory at COVAB.

This lab offers opportunities for training graduate students, collaborative research and diagnostics. This has given me an opportunity to supervise graduate students; continue publishing; put together a research and grant writing team in collaboration with the University of Cambridge (UOC) and Cornell University (CU). The grant with UOC ended last year in 2020 and that with CU is ending in 2022. In 2020, during the COVID-19 pandemic, I was appointed on the steering committee to oversee the establishment of the Centre for Bio security and Global Health (CEBIGHE) laboratory (Fig 2) at Makerere University. This lab is being prepared to handle research in diseases of zoonotic nature. Its establishment was funded by the African Development Bank through the Ministry of Education.



Fig 2: Dr. Wampande outside the CEBIGHE laboratory premises.

Furthermore, since zoonotic diseases require a specialized lab (Biosafety level-3), funding to establish it was inevitable. I (as a Co-PI) and a team of two others won a UGX 1B grant from the government of Uganda through Ministry of Science Technology and Innovation (MOSTI) to establish this lab. Currently, we are manipulating zoonotic pathogens and performing experimentation on small lab animals such as mice, rats, rabbits and non-human primates for validation/

testing of potential vaccine, therapeutics and diagnostics candidates. The grant spans a period of two years. It is the third grant I have been awarded in my post-doctoral career, the first being an Alborada grant I won in collaboration with the University of Cambridge in 2018 and the second being the one that established the CEBIGHE.

For the Alborada grant, I and a team of researchers reported the role of ticks in harboring a unique Crimean Congo Hemorrhagic Fever Virus (CCHFV) strain in addition to other animal and wildlife specific viruses. Surprisingly, of those viruses observed in ticks, 25-30 % couldn't be identified in any of the available viral databases. Thus, further analysis is being undertaken to fully characterize them and we hypothesize that these might be "novel viruses."

Nevertheless, the CCHFV strain was detected in African blue ticks feeding on cattle in an abattoir in Kampala. These cattle originated from a farm in Mbarara, a major cattle-trading hub for much of Uganda. Characterization of this novel strain adds to our limited understanding of the natural diversity of CCHFV circulating in both ticks and in Africa. Such data can be used to inform the design of vaccines and diagnostics, as well as studies exploring the epidemiology and evolution of the virus for the establishment of future CCHFV control strategies.

Going forward, I will continue to conduct Tuberculosis (TB) research among humans. My most recent study in this area examined whether the interaction between host genes and Mycobacterium tuberculosis (MTB) can affect TB severity in humans. The study hypothesized that the genomes of the human host and MTB interact to modulate risk of developing active TB or increase the severity of disease, when present. Findings indicate that there are changes in human genomes that increase susceptibility to specific MTB strains and that the association between TB severity and human genetics can be due to an interaction between genes in the two species.

Using a student-centered approach to prevent teenage pregnancy

By Dr. Susan Atuhairwe, THRiVE-2 PhD Fellow

Uganda has one of the highest fertility rates in the world, at 5.4 children per woman, according to the 2016 Demographic Health Survey. The rate of teenage pregnancy has stagnated at about 25% despite government and other stakeholders' efforts to address this challenge. The COVID-19 pandemic with its associated nation-wide lockdown and schools' closure exacerbated the issue of teenage pregnancy. Various media published distressing articles on the inflated number of teenage pregnancies during the lockdown period. Regrettably, even with the re-opening of schools, some of these teenagers were unable to continue schooling and have since gone down the vicious cycle of perpetual poverty.



Dr. Susan Atuhairwe talks to a teenager from her work station at Kawempe Hospital

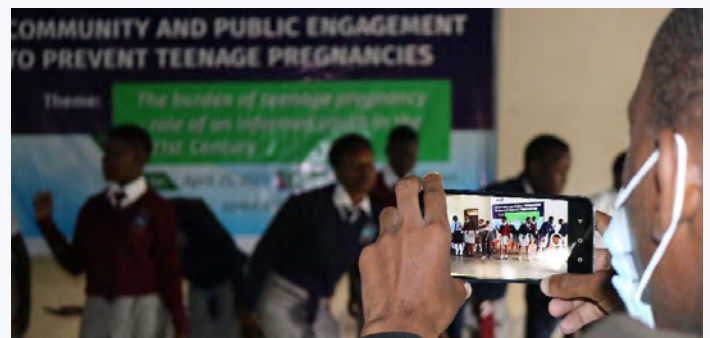
Through THRiVE's Research Enrichment Community and Public Engagement (RECPE) program, I adopted Jovens' High School in Entebbe in order to execute my school engagement activities. The main purpose of my work was to use a student-centered engagement approach to improve knowledge and practices on prevention of unintended pregnancies among adolescents. While this topic arose from a reproductive health issue gap identified by the students, the COVID-19 pandemic made it more relevant to both the students and researchers. We hypothesized that students are more likely to package and convey information to their peers in a way that they would understand and assimilate better than adults.

In 2019, we engaged the school administration on the proposed research program, which they embraced and cited as relevant. We held several engagement sessions that included talks, brain storming sessions and watching videos with selected students. After each session, these students were charged with doing further research on teenage pregnancies. From the students work, we identified four main themes namely: drivers of unintended pregnancy; consequences of unintended pregnancies; ways of prevention and sources of information. The students formed groups according to the themes and each group suggested engagement modes that they would use to convey information to the other students. The three top modes chosen were: songs, poems, and drama. Each of these engagement modes had the four running themes.

Throughout this time, students freely expressed their minds and gave us snippets of their talents through songs, acapellas, poems and skits. On April 25th 2021, the students made presentations to the entire school, under the theme, "The burden of teenage pregnancy-role of an informed youth in the 21st century". This event was attended by students, teachers, THRiVE secretariat, school headteacher and the media. There was active interaction with the students and sharing of brilliant ideas.



Students of Jovens High School-Entebbe present a skit on teenage pregnancy



A member of the audience captures students' presentations on his phone

As a researcher, this whole process has been a learning and mentorship opportunity for me. Key lessons learned include:

- 1) Endorsement by the school administration is crucial for the success of such a program. As gate keepers to the students, the administration's engagement right from the start made them a part of the study process design and successful implementation.
- 2) While the issue of teenage pregnancy is primarily seen as affecting girls, including boys to demonstrate the key role they play was eye opening for students.
- 3) Students have a lot of information regarding drivers of teenage pregnancy. It is only by addressing these drivers using sources of information applicable to their age that suitable solutions can be attained to prevent further pregnancies!
- 4) The information students had attained from Susan, prior to the lock-down, helped them during the prolonged period of school closure. Many students testified that the knowledge they had acquired helped them abstain from sex, and avoid risky behaviour. They also shared this information with their peers in the community.
- 5) Using edutainment provides both a learning opportunity and inspires students to become better citizens.
- 6) Students have potential to transform their personal and peers' lives using their knowledge, talents, energy, ambition given the opportunity and an enabling environment.

I thank THRiVE for supporting this work and providing opportunity for the students of Jovens' High School generate these information sharing modes with peers using this innovative approach.

News from Cambridge–Africa

By Corinna Alberg, outgoing co-ordinator-THRiVE-2 at Cambridge, UK

We continue to work remotely, which with good internet connectivity and video conferencing apps such as Zoom, allows us to be connected and continue our work. While there are advantages of working remotely, particularly environmental advantages, we nonetheless lose the enjoyment of interacting with people in person and chances of building new connections. I hope that some sort of hybrid working arrangements will develop post pandemic that might be more sustainable for our cities. I am also aware that without reliable and fast internet, relying on remote working will have a negative impact and it is important that we do not leave out those people who cannot easily be connected remotely. Remote working has the potential to reinforce and deepen inequalities.

So to more positive news. Earlier this year, we were delighted to welcome Dr. Tabitha Mwangi as the new Cambridge-Africa manager. Tabitha has more than 20 years' experience in research, teaching and public engagement. She undertook her PhD on malaria at KEMRI/WT centre in Kilifi, Kenya, went on to work as a lecturer at Pwani University in Kenya and then at Anglia Ruskin University, when she moved to the UK. Tabitha is also a freelance health writer and her blog, Health Kenya won Kenya's best public health BAKE award in 2017 and 2018. Tabitha is happy to publicise the exciting work of THRiVE fellows and her media skills complement the great work being undertaken by Racheal Ninsiima, THRiVE's communication officer.



Dr. Arthur Kwizera on a Sunny Spring Day in Cambridge

Much of the Cambridge-Africa activities have reorientated to online activities. The [ALBORADA Research fund call](#) is open to applications until 3rd September 2021 and we encourage THRiVE fellows, who have completed their PhD and are continuing with post-doctoral research, to apply. These competitive awards support collaborative research between African and Cambridge postdoctoral researchers and depending on the nature of the research, awards of up to £20,000 may be made to support new research collaborations. A number of THRiVE fellows have previously been successful in their applications for ALBORADA awards.

One of the few benefits of COVID-19 has been the variety of online opportunities, especially for conferences and courses. We have sponsored a number of students from the Masters in Immunology and Clinical Microbiology course at Makerere University to attend recent online conferences. These events would have been prohibitively expensive for students to attend from East Africa but some scientific conferences have introduced rates for participants from low-income countries that make them accessible. So do check whether the key conferences in your field are taking place online and if they are offering affordable ticket prices. The Cambridge-Africa director, Dr Caroline Trotter is organising one such online event in July, a mathematical modelling short course for infectious disease dynamics being run in conjunction with the University of Nairobi Center for Epidemiological Modelling and Analysis. This course is aimed at life scientists, public health, medical or veterinary professionals based in East Africa and will be offered free of charge to 25 participants. Further details including on how to apply will be available on the [Cambridge-Africa website](#).



Dr Tabitha Mwangi, the new manager of Cambridge-Africa

One of the major changes brought about by the pandemic and my work with THRiVE is the lack of travel and hence, absence of THRiVE fellows coming to Cambridge. Nonetheless, it was a real bonus to meet with Arthur Kwizera, THRiVE PhD Fellow, this Spring in Cambridge. Arthur has been able to continue with his research remotely and it was a pleasure to catch up on his progress in person. Our meeting was outdoors as lockdown at the time meant only meeting up with one person for exercise purposes (a walk and talk counts). He introduced to me to a new nature reserve that has recently opened in Cambridge.



Dr. Tabitha Mwangi
as the new Cambridge-
Africa manager.

Tabitha has more than 20 years' experience in research, teaching and public engagement.

Involving young people in health research: benefits, challenges & best practice

By Dr Asimina Vergou, Education Research Programme Lead, Wellcome



Research with young people in Tanzania ©Dalberg

'We are going to leverage the social capital so that we can beat COVID-19... Youth are critical to this approach' explains Dr. Neema Kaseje, who leads the Wellcome Trust funded **Integrated COVID-19 response** in Kenya. The project involves young people, equipped with mobile technology, who accompany community health workers to visit households, screen for COVID-19 symptoms and educate people about preventive measures.

Recognising young people's abilities and potential, Wellcome Trust commissioned Dalberg, a global mission-driven advisory firm, to explore the role, benefits, and potential of young people's involvement in health research. The research comprised a rapid evidence review of 187 academic papers, followed by a consultation of 146 stakeholders across 18 countries.

The study titled: 'A rapid evidence review of young people's involvement in health research' demonstrated that young people (aged 10-24 years) add value when they are involved in health research, meaning research that is done 'with' or 'by' young people, as opposed to 'for', 'about', or 'on' them (NHS Health Research Authority, 2020). Young people can contribute to different stages of the research cycle from defining research agendas, designing research, collecting and analysing data, or disseminating and translating findings. Two case studies illustrate young people's involvement in health research.

Case study 1

Young people with disabilities lead focus groups and interpret language used by their peers in qualitative data analysis - Chappell et al. (2014)

In KwaZulu-Natal, South Africa, three young people with a physical disability, aged 15-20, were selected to be co-researchers in a study on youth sexuality in settings with high HIV-positive population rates. The study used a participatory research design. The young people attended a one-week training on ethical issues, data collection, and communication skills. Thereafter, they conducted focus group discussions and individual interviews with other disabled young people and analysed the data in collaboration with the lead researcher.

These young people gained practical life skills and new knowledge related to the research topic, about themselves and their abilities. The research project benefited from the co-researchers as they were able to glean insights that may not have been available to the adult researcher because of understanding better the language of the young people. The lead researcher learnt that the more he 'let go' of controlling the process, the more insightful and meaningful the analysis became.

Case Study 2

Young people produce films about community experiences of tuberculosis (TB) and translate scientific knowledge -Young et al. (2018) and Masuku et al. (2018)

Eh!woza (meaning Hey! Come with us) is a programme that engages young people as partners in reducing the impact of TB in Khayelitsha township in Cape Town, South Africa. It began as a one-off project but has developed into a programme that recruits 12-15 learners aged 14-20 annually. It is jointly run by the University of Cape Town's Institute of Disease and Molecular Medicine, a visual artist, and an NGO. Young people learn about TB, clinical trials, and TB research through six science workshops delivered by a senior researcher, PhD students and postdoctoral fellows. Young people also attend a two-week film production training and create films by interviewing township residents about their experiences of TB. Young people's involvement increases the dissemination and translation of knowledge about TB. Young people have become more comfortable having conversations about TB with their families and talking openly about TB issues considered taboo.

Benefits

Wellcome's study showed that young people can better identify research questions and methods that fit their needs and experiences because they understand their peers' needs, preferences, and capabilities. They are also more trusted and have better access to networks, allowing them to recruit young research participants, lead data collection, and disseminate research findings in ways that adults cannot.

Young people's involvement in health research can also benefit their communities through increasing community awareness of particular problems and, in some cases, influence communities to take action to respond to health challenges. Evidence also suggests benefits for the young researchers as they acquire research and transferable skills, feel more empowered, have improved career/academic outcomes, and increase their understanding of health issues. In some cases, this might lead to improved health outcomes (see figure 1).

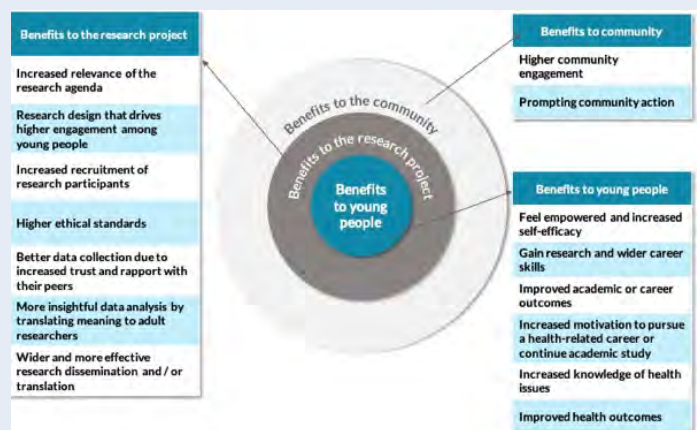


Figure 1: Benefits of involving young people in health research

Challenges

Despite the documented benefits, a range of challenges hinders the involvement of young people in health research such as:

- Weak Monitoring and Evaluation (M&E), including a lack of a standardised M&E methodology.
- Lack an awareness of evidence that demonstrates the benefits of involving young people.
- Some researchers are discouraged by the burden of ethics approval processes.
- Need for access to more and better training for researchers and

young people.

- Difficulties in identifying and maintaining a network of young people that researchers can work with over a period and need to access researchers' networks to learn from each other.

Best practices

Guidance for involving young people in health research is context-specific and limited.

- When involving young people in health research, it is important to seek their written consent. Parental consent should be obtained for younger groups, usually when under 16, in addition to 'assent' from young people.
- Involvement in research can expose young people to risks, for example, if the process

triggers recalling upsetting memories from their lived experience. Researchers need to minimise the potential risks e.g., by ensuring confidentiality and anonymity while preserving access to opportunities for young people.

- Researchers need to adjust communications to suit young people's needs including the language used, communication methods, and listening to how young people prefer to speak about a topic.
- Trust-building and balanced power-sharing between adults and young people are essential. This can involve asking for feedback and acting on it, being non-patronising, transparent, open to new ideas, paying attention to the skills and benefits researchers can offer young people,

as much as the benefits those young people can offer to the researchers.

- Particular research methodologies, approaches, and methods are widely used and meet young people's capabilities well such as community-based participatory research, youth-led participatory research, young persons' advisory group, and photovoice.

An opportunity

Wellcome's study revealed gaps in the evidence base. These gaps create an opportunity for the THRiVE's early career and more established health researchers to build the evidence base on involving young people in health research in Africa and advocate for this way of working that brings benefits to the research, the young people and their communities.

Celebrating Prof Ovuga's service as THRiVE's co-applicant at Gulu University

By Racheal Ninsiima



Prof. Emilio Ovuga- retired professor of psychiatry and mental health

Prof Emilio Baliki Liociri Ovuga, a retired professor of psychiatry and mental health, bears an enviable career profile, spanning more than four decades. He is a tireless advocate for people's mental wellbeing and was the driving force behind the development of a curricula for training medical students in psychiatry in Uganda. Prof Ovuga attended Makerere University and graduated with a Bachelor of Medicine and Bachelor of Surgery (MBChB) in 1976 and a Masters of Medicine, specializing in Psychiatry in 1981. In 2005, he attained a joint PhD in Suicidology and Suicide Prevention, and Psychiatric Epidemiology of Karolinska Institute in Sweden and Makerere University.

Upon completion of his Masters, Prof. Ovuga worked as a psychiatrist at Mathare Mental Hospital in Nairobi, Kenya (1981- 1982); Provincial Psychiatrist at Kakamega Provincial Hospital in Western Kenya (1982-1984); and as a Senior Psychiatrist in the Transkei, South Africa between 1984 and 1989. Thereafter, he returned to Uganda and joined Makerere University as a lecturer of

psychiatry and he later headed the Department of Psychiatry. According to an online blog article titled: 'Dr. Emilio Ovuga is a raging professor of Psychiatry and Mental Health of Gulu University', his work led to the recognition of psychiatry as an important clinical discipline that became examinable in its own right for the award of the medical degree of Makerere University.

"Dr. Ovuga's negotiations with the Ministry of Health led to the rapid scale up of the Department of Psychiatry, and the subsequent training of psychiatrists to PhD levels. Dr. Ovuga has developed curricula for training medical undergraduate students in basic psychiatry, graduate students in psychiatry at master's level, and lay community members in lay peer counseling of people in crisis," reads the article.

Much of his early research was dedicated to examining psychosocial problems associated with alcohol use; prevalence of post-traumatic stress disorder in formerly abducted youths; factors associated with depression symptoms among school going children and sexual violence among

➔ Much of his early research was dedicated to examining psychosocial problems associated with alcohol use; prevalence of post-traumatic stress disorder in formerly abducted youths...

formerly abducted girls in Northern Uganda.

For two decades (between 1986-2006), people in Northern Uganda were exposed to wide spread war atrocities such as torture, sexual assault, abduction and rape by the Lord's Resistance Army (LRA) rebel group. Exposure to these crimes subjected many of the citizens to long-term mental health problems such as post-traumatic stress disorder, depression, anxiety and drug abuse. Prof Ovuga has extensively researched and written about these issues. He has over 80 publications in peer reviewed journals such as the Lancet, Journal of Translational Psychiatry and the Journal of Epidemiology and Community Health.

TIME AT GULU UNIVERSITY

In 2007, he became the Dean for Gulu University's Faculty of Medicine until 2015. When Training Health Researchers in Vocational Excellence in East Africa (THRiVE) was formed in 2009, Prof Ovuga was selected to become the program's Co-Applicant at the university.

"Prof Sewankambo approached

me for a partnership to apply for a grant under the Wellcome Trust funded African Institutions Initiative (AII) and we brainstormed on different ideas to advance science research in the Northern region. Gulu University was awarded 243,069 pounds for five years. This was used to improve infrastructure, teaching methods and strengthen research ethics," he recalled during an interview with THRiVE.

In his time in the position, he secured closed circuit televisions (CCTVs) and had them installed at the Faculty of Medicine library. This ultimately led to improvement of security of books, equipment and persons. He testifies that thefts and vandalism that were occurring prior to installing the CCTVs all stopped.

"Prior to this, people would even vandalize the sockets," he reminisces.

The university administration later installed CCTV cameras throughout the university after witnessing marked improvement of security at the Faculty of Medicine. Under THRiVE, Prof Ovuga helped to create a vibrant research ethics committee now called the Gulu University Research Ethics Committee (GUREC) and was its pioneer chairperson. GUREC is responsible for reviewing and approving research protocols to ensure that they meet all the ethical standards of research.

Still in 2009, Prof Ovuga served as the Founding Chair of the national ethics committee known as Forum of Research Ethics Committees in Uganda (FRECU). As THRiVE's Co-Applicant and ethics committee chairperson, he contributed to post conflict recovery in northern Uganda through establishing a strong research and ethics culture. THRiVE-1, afforded researchers with postdocs,

masters and pump priming grants to conduct research and this saw a burgeoning number of research papers being written. Among those awarded was Dr Kennedy Amone-P'Olak, a post-doctoral fellow, who authored 16 papers and four book chapters under Ovuga's mentorship.

To further strengthen research and research capacity building in the university, Prof Ovuga and Prof Sewankambo applied for a grant dubbed, Medical Education for Services Delivery to All Ugandans (MESAU) under the Medical Education Partnerships Initiatives (MEPI) from the National Institutes of Health (NIH). This grant led to the remodeling of the medical education curriculum to include community-based education.

"Here, students were mandated to go into communities for four or five weeks to practice their clinical skills. Thus, with the MEPI grant, we were able to integrate research, clinical and community care under one umbrella," he said during an interview.

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Additionally, THRiVE and MEPI came along with teleconferencing and telemedicine and this implied

that the university had to have consistent internet connection. Thus, fibre cable was installed and internet connectivity was upgraded at the university.

MORE GRANTS

Prof Ovuga went on to win more grants which saw rapid developments at Gulu University. Among these was the four-year Enhancement of Research Capacity (ENRECA) grant which was funded by the Danish International Development Agency (DANIDA).

"Under this grant, we held community-based reconciliation activities to help people aggrieved by the war to speak out about their experiences. These were recorded in a clay pot which acted as an amplifier connected to a transmitter hanged on a roof of a hut. People would gather to listen to the stories," he said.

The ENRECA grant strengthened social rehabilitation and improved the security of people in the post-conflict northern region.

He also won a grant from the World Health Organization (WHO) which funded a study to determine the public health importance of tape worms as a cause of epilepsy in humans. The study was conducted in Adjumani, Kitgum, Moyo and Gulu districts.

"A branch of the study was to develop sero-diagnosis for detecting antibodies against tapeworms. It was discovered that cysts obtained from pig carcasses constitute a primary source for diagnostic tools used for the detection of human tapeworm infection," he explained.

After registering success, he wrote a proposal to turn the study into a postdoc program.

Another project he attracted to the university was on suicide prevention in post-

conflict societies of Gulu and Amuru districts. Here, health workers were trained to recognize depression, suicidal feelings, anxiety and psychosis and manage the conditions accordingly. Furthermore, lay members of society were trained in counselling in order to respond to episodes of crises in families. It is reported that suicide rates dropped by more than 75% within less than a year.

As Dean of the Faculty of Medicine, Prof Ovuga won 11 research grants until he retired from active academic service in 2015. In addition to his academic contribution, Prof Ovuga offered philanthropic support to peace building initiatives in northern Uganda. He was part of the Northern Uganda Peace Initiative (NUPI) which coordinated peace talks between Uganda's government and Joseph Kony's LRA. These peace talks eventually ended the 20-year-long rebel insurgency in northern Uganda in 2006.

➔ As Dean of the Faculty of Medicine, Prof Ovuga won 11 research grants until he retired from active academic service in 2015...

Although he has stepped back from full-time work, he remains active in the research field, serving as a reviewer of some scientific journals. Beyond his academic career, he serves as the Founding Chief Executive Officer of an agricultural research company, Bomvitae Agro Industries Limited (BAIL) and is a member of the International Association for Suicide Prevention.

THRiVE highly recognizes and thanks Prof Ovuga for his efforts throughout his tenure at Gulu University.

'Prof. Ovuga was the driving force behind the development of a curricula for training medical students in psychiatry in Uganda.'



Prof. Emilio Ovuga
Retired professor of psychiatry and mental health.

Ethnobotanist studying medicinal plants used to treat TB in Northern Uganda

Dr. Christine Oryema – THRiVE-2 Career Development Awardee



Dr. Oryema Christine with traditional healers in the medicinal plant garden

Use of herbs and other plants for the prevention and cure of disease is an ancient practice in Uganda, spanning centuries. Uganda, with its varied floral diversity, is home to rare herbs and plants having a crucial medicinal role to play in the treatment of diseases such as Malaria, Tuberculosis and common colds. Tuberculosis (TB) has emerged as a global health issue and remains one of the world's deadliest infectious killers. The TB death rate in Uganda was reported at 16% in 2019 (35 people dying per 100,000) and approximately 65,000 people contracted TB in that year. This makes Uganda one of the high burden TB countries in the world.

In many parts of Uganda, reliance on medicinal plants and traditional healers for treatment of disease is high. Dr. Christine Oryema, an ethnobotanist at Gulu University and THRiVE Career Development Awardee, undertook a one-year study to document medicinal plants used in the treatment of Tuberculosis in Acholi subregion, northern Uganda. The objectives of the research were to: document the medicinal plant species that are traditionally used to treat

Tuberculosis (TB) in humans by the Acholi community in northern Uganda; determine the phytochemical compounds found the crude extracts of selected plant species; analyze the plants for their anti-mycobacterial activity efficacy against the TB bacteria and establish a demonstration medicinal plant conservation garden. Dr. Oryema, conducted this study together with Dr. Malinga Geoffrey Maxwell (CO-PI) and Dr. Rutaro Karlmax (CO-PI) from Makerere University.

➤ The objectives of the research were to: document the medicinal plant species that are traditionally used to treat Tuberculosis (TB) in humans..

The study was conducted in the districts of Kitgum, Pader, Nwoya and Omoro. In each district, two parishes were randomly selected and a total of 36 villages surveyed. Open and close ended questionnaires and interview guides were the research tools and these were self-administered to the respondents by the researchers.

Thereafter, medicinal plants which were mentioned by the respondents as used in the treatment of TB were collected from the field and pressed to dryness. Scientific identification was done in the herbarium at Makerere University's Botany department. Regarding the qualitative and quantitative tests, samples were extracted in different solvents of different polarities and analyzed for a number of phytochemical compounds including Alkaloids, Flavonoids, General quinones,

Anthraquinones, Phytosterols, Diterpenes, Coumarins, Steroid glycosides, Saponins, Tannins, Cardiac glycosides and Alkaloid salts.

Nine medicinal plant species used in the treatment of TB were established and these belonged to five main plants families, with one family having mores species than the others. Results showed that the tested samples of the medicinal plants contain most of the phytochemical compounds tested with just a few exceptions. This implies that these plants could be a source of a new class of drugs against TB. Therefore, the study recommends that: the active compounds be isolated for further confirmatory tests for future use; the efficacy of the compounds be tested against the TB bacteria and there is need to seek more funding for completion of the establishment of the medicinal plant garden at Otumpili Village, in Koch Ongako Sub county, Omoro District. Furthermore, communities should be trained and encouraged to established their own gardens at their homes.

➤ The study was conducted in the districts of Kitgum, Pader, Nwoya and Omoro...



The medicinal plant garden in Otumpili village, Omoro district

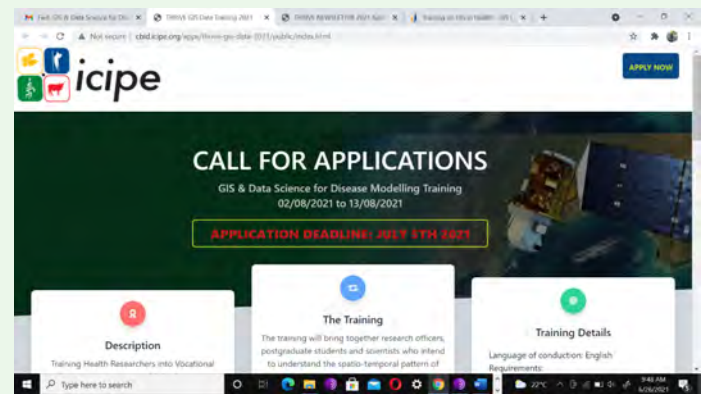
Apply for the GIS & Data Science for Disease Modelling Training

By Racheal Ninsiima

THRiVE and the International Centre of Insect Physiology and Ecology (*icipe*) are organizing a Geographic Information System (GIS) and Data Science for Disease Modelling Training to provide basic and intermediate understanding of data and geospatial tools for disease prediction and monitoring. Furthermore, the training will introduce the concept of system thinking and system dynamics.

The training will bring together research officers, postgraduate students and scientists who intend to understand the spatio-temporal pattern of diseases. Participants will learn how to apply GIS in public health and epidemiological research. Additionally, they will learn how to work with spatial and non-spatial data, how to visualize and map it.

The training is scheduled to happen between 2nd and 13th August 2021 at Duduville Campus, icipe- Kasarani. It will encompass two components namely: GIS and modelling and data science and management. Trainees can apply for either or both components. To apply for this course, visit this link: <http://cbid.icipe.org/apps/thrive-gis-data-2021/public/index.html>. Application deadline is July 5 2021.

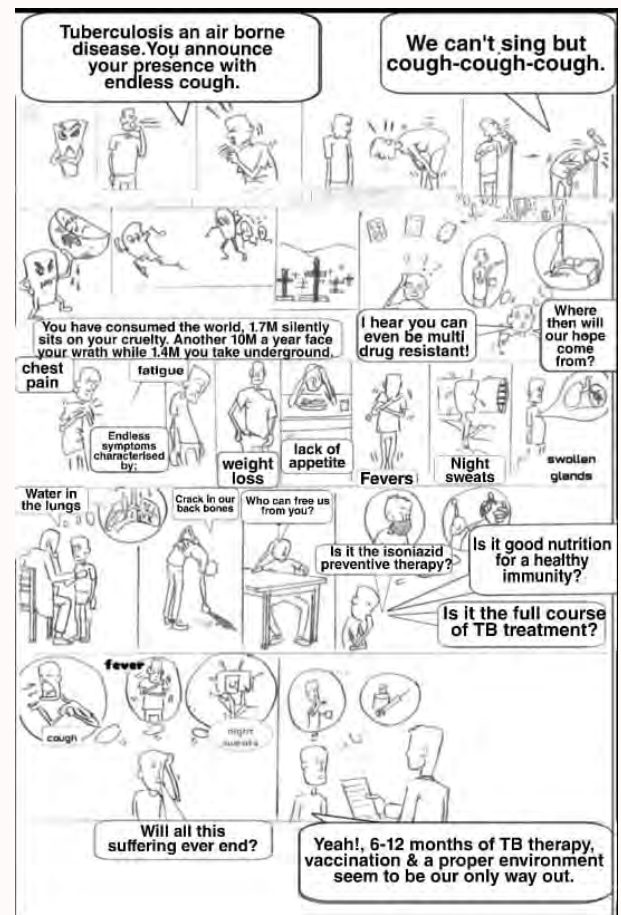
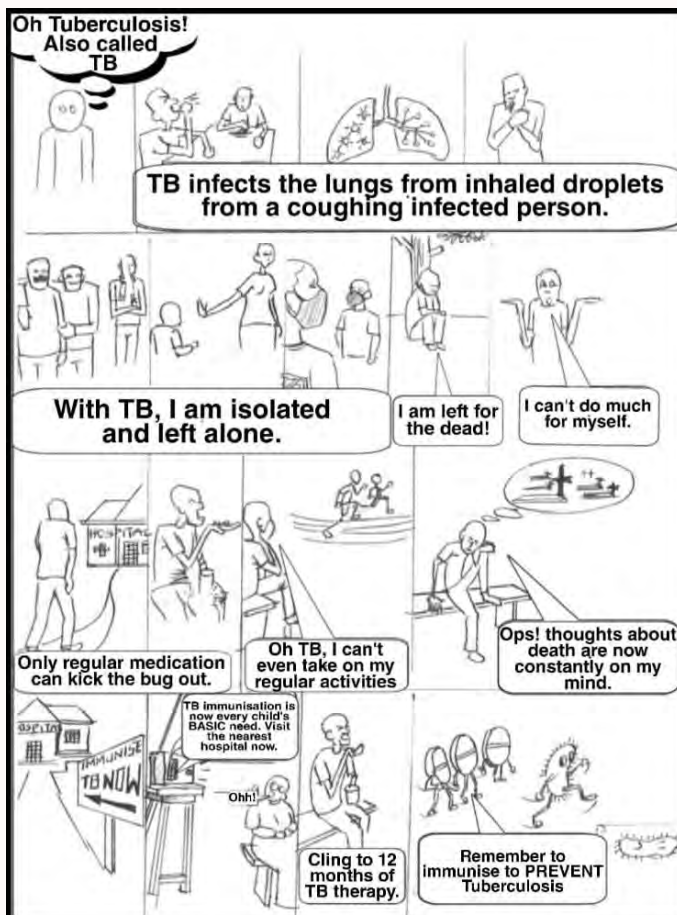


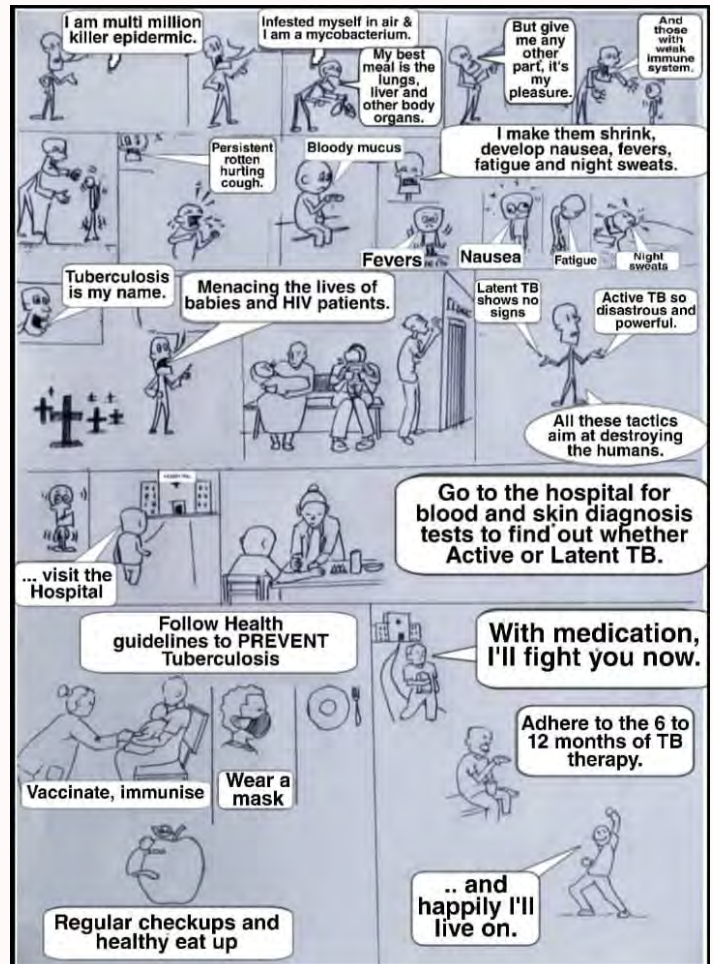
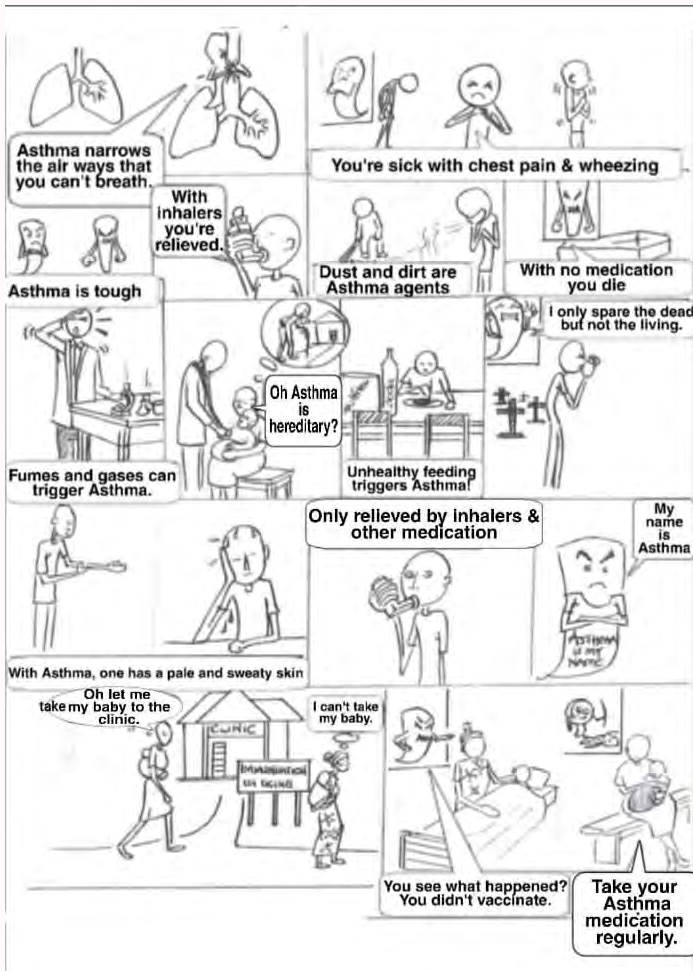
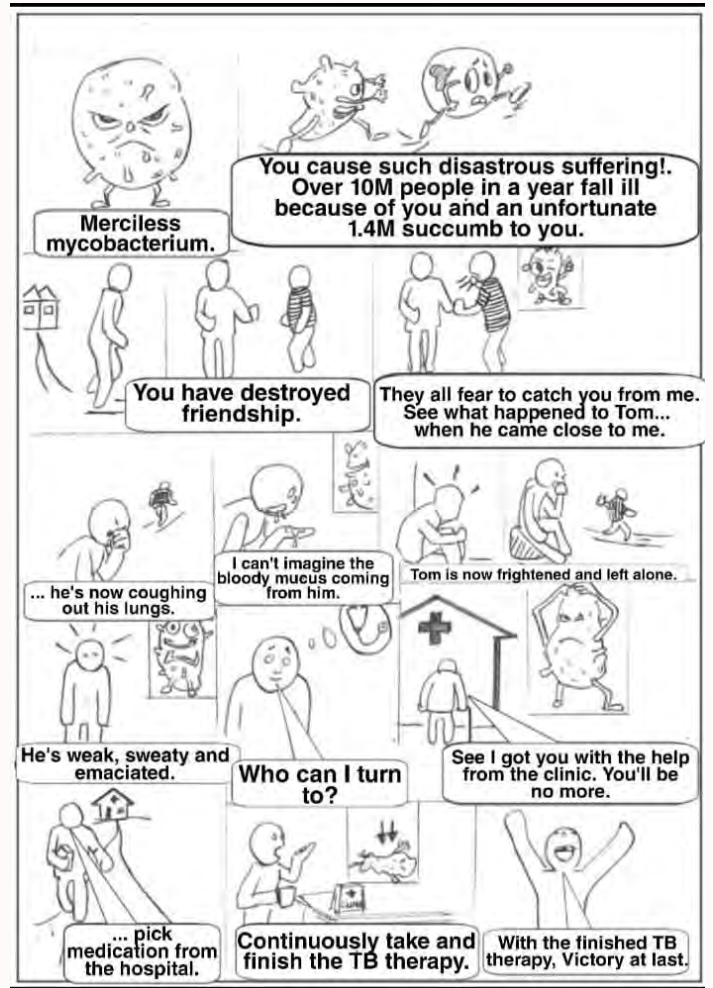
Creating TB and Asthma Awareness through use of cartoons

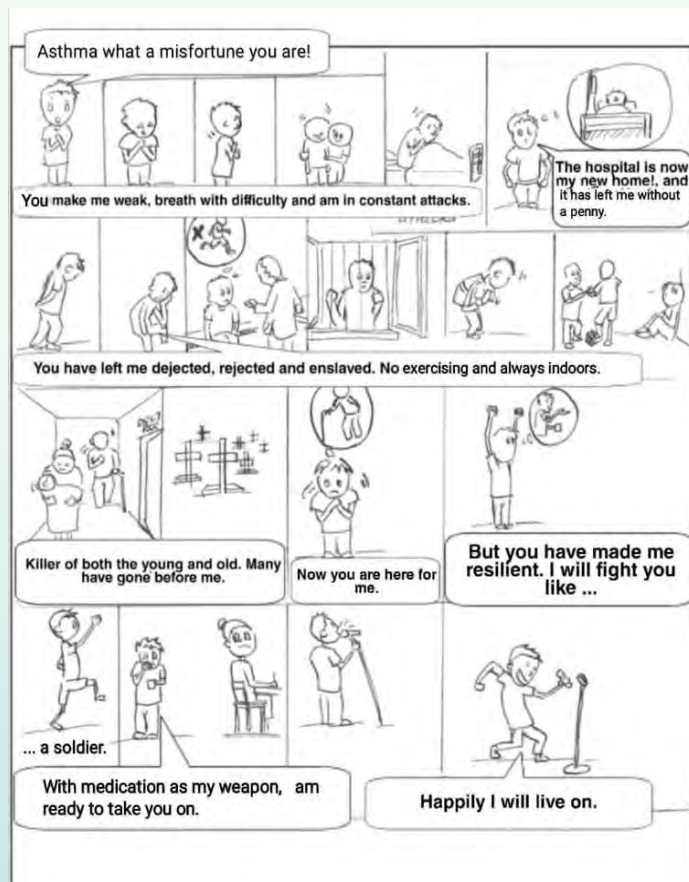
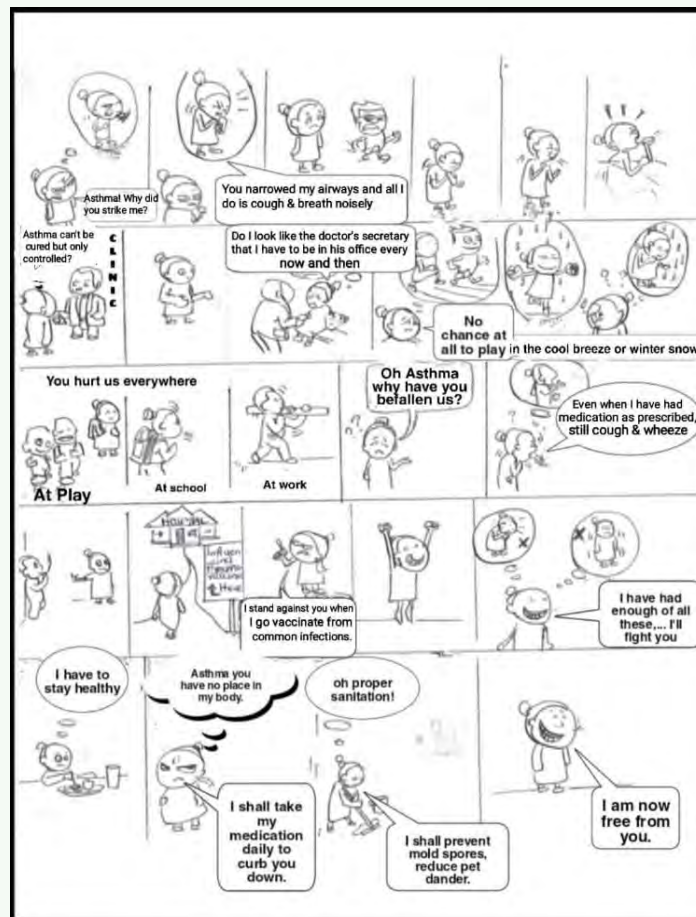
Dr. Jonathan Mayito and Mr. Richard Kwizera (THRiVE-2 PhD fellows) worked with Midland High School, Kawemp students to develop poems and graphic cartoons on the prevention, clinical presentation and treatment of tuberculosis and asthma. The poems and cartoons are being compiled into a self-user book which will be used to cascade information on tuberculosis and asthma to schools and communities at large. Student leaders working with the literature teacher selected 10 students to develop the

poems which were later be passed on to another group of 10 students who working with the art teacher turned the messages in the poems into the graphic cartoons. The PhD fellows provided general information about the two diseases which worked as the resource for the students as they developed the poems and cartoons. The literature and art teachers worked closely with the students to ensure a guided process in developing the poems and cartoons. The art expert used the initial art work by the students to develop

the final cartoons. A mini workshop was also held between the art students, project coordinator and the PhD students to critique and improve the art pieces. However, due to the COVID-19 restrictions in the schools, the art expert could not work directly with the art students. Nonetheless, an evaluation has been carried to determine the impact of participating in the project on the students' knowledge, attitude and practices regarding tuberculosis and asthma.







For More Information about THRIVE

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