



AT THE FOREFRONT OF ZAMBIA'S MEDICAL PROGRESSION



Making Healthcare Accessible

The Centre for Infectious Disease Research in Zambia continues to work towards its mission of making quality healthcare a reality for a greater number of Zambians

Writer: Tom Wadlow | Project Manager: Callam Waller

To say that public health is in the spotlight right now would be something of an understatement.

Not only has the COVID-19 pandemic brought into focus the importance of basic hygiene standards and threat of transmissible viruses, it has underlined just how critical a population's good health is to the social and economic prospects of a nation.

Economies have ground to a halt as labour forces are confined to their homes or restrictions in how they would normally work – indeed, the very meaning of the term normal is changing before us.

In Africa, while the impact of the virus has not reached levels of the likes seen in Europe and the United States, the coronavirus outbreak has still led to a number of deaths and restrictions on economic and social activity, once more highlighting the importance of healthy societies and functioning health systems.

Improving access to such medical provision is thus paramount, and the Centre for Infectious Disease Research

in Zambia (CIDRZ) has made this its mission in its home country.

Founded in 2001, it is a non-governmental organisation focussing on three pillars – direct service delivery, research and training – by spearheading innovative capacity development, exceptional implementation of science and research, and impactful and sustainable public health programmes.

Its research into major health threats such as HIV continues to be lifechanging for many Zambians, work which is underpinned by core values of accountability, equity, honesty, productivity, respect and transparency in everything it does.

“We are committed to answering research questions relevant to improving health in Zambia, including the threat posed by COVID-19,” comments CEO Dr Izukanji Sikazwe. “Our research aims to identify locally relevant, culturally acceptable, resource-appropriate, evidence-based interventions that will influence policy and thus raise healthcare service delivery in the public health sector.

“Research has ranged from small



pharmacokinetic and behavioural studies to individual and cluster-randomised trials to large multi-country programme evaluations. We use the latest methodologies to generate evidence and advance knowledge.

“Our clinical trials contribute to the development of new interventions, our implementation science provides solutions to system challenges, our qualitative research broadens understanding, and our laboratory and immunology science improves impact.”

Such activities are funded through competitive grants, a process which Dr Sikazwe admits presents challenges as well as opportunities.

Projects are financed individually, which dictates CIDRZ’s work, but the organisation has mastered the process due to its experience and footprint in Zambia and close relationship with

the Ministry of Health and other key partners.

This is shown by the fact it submits 50 to 60 applications a year and commands a 45 percent acceptance rate, well above the 10-15 percent industry norm, a figure which should only be boosted by the establishment of a new business development unit to support competitive application submissions.

PIONEERING PROGRESSION

Once a project is secured and requires laboratory testing, the investigators rely on exceptional team working in the state-of-the-art CIDRZ Central Laboratory (CCL).

Initially set up to support clinical trials focussed on prevention of mother to child transmission of HIV, its remit has expanded exponentially since. The CCL is able to carry out laboratory

testing that includes microbiology, mycobacteriology, virology, haematology, flow cytometry, immune cell processing, immunochemistry, and clinical chemistry.

This is possible thanks to sustained investments in human resources, leading-edge high throughput equipment and an information management system worth more than \$1 million.

“The laboratory continues to support large numbers of clinical trials and government programmes,” Dr Sikazwe adds. “We have also invested in a modern specimen repository system, the largest in country that is able to store over a million specimens using high tech equipment to map, track specimens, and monitor storage temperature.

“All areas of our laboratory are supported by modern safety equipment, including a biosafety level III laboratory for processing and testing highly infectious materials.

“As well as this, our collaboration with different working groups, consisting of research, programmes and clinical care, has led to acknowledgement and recognition at both national and international levels.

“With these positive strides and continuous improvements in quality management systems of laboratory services, CCL received its ISO 15189:2012 accreditation in July 2018 and became the first medical laboratory in Zambia to be accredited by Southern Africa Development Community Accreditation Services (SADCAS).”

These are important recognitions and demonstrate CIDRZ’s adherence to globally sought-after standards.

In terms of specific projects, the organisation’s flagship grant continues to be centred around the fight against HIV, the PEPFAR/CDC award being first secured in 2004. The abbreviation stands for the President’s Emergency Plan For Aids Relief/Centers for Disease Control and Prevention, a global HIV/Aids programme

WHAT HAS INSPIRED YOUR MEDICAL CAREER TO THIS POINT?



DR IZUKANJI SIKAZWE: “I enjoyed learning science subjects in high school, so my passion and career direction stemmed from there. My mother was a matron nurse here in Zambia, so I was familiar with hospital surroundings.

“It was a very distressing time rotating through the medical wards as a student in the late 1990s and early 2000s at the height of the HIV crisis in Zambia. There was no treatment available and I saw the impact of this on friends and relatives, so from that point onwards I was determined to do something in the field of HIV and infectious diseases.

“My post-graduate training was interrupted by senior doctor strikes, so I went to Maryland in the US to take my exams, coming back to Zambia at least once a year to touch base with colleagues at the main teaching hospital. Around 2006 when I returned, I started to help set up rural HIV clinics and training programmes, a project which was being funded by the US government.

“After this I completed a two-year fellowship in infectious diseases and became a technical advisor to the Zambian government on its HIV programme, and ever since have been more involved on the public health side, including my position now at CIDRZ.”



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CEPHEID SOUTH AFRICA Famous Grouse House, Kildrummy Office Park
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sponsored by the government of the United States.

Its objective? To bring an end to the HIV epidemic and attain the universal 95/95/95 target.

Zambia is close to reaching this objective, which requires that 95 percent of the population know their HIV status, and of those that are positive, 95 percent of them will be on treatment, and of those on treatment, 95 percent will be virologically suppressed.

CIDRZ has been working actively across four provinces – Eastern, Western, Lusaka and Southern – to make this a reality.

Dr Sikazwe details: “During the last year we supported these efforts by providing health services and deploying frontline health workers. We also provided technical assistance to provincial and district teams to improve delivery of services in 296 health facilities in Lusaka and Western provinces.



“We identified 45,150 HIV positive people out of 861,457 tests in Lusaka province, and 9,397 out of the 313,233 tested in Western province. Working with our network of community lay providers and volunteers, we improved HIV case finding through contact tracing and social networks.”

Further, CIDRZ facilitated supply and distribution of HIV self-testing kits, where citizens test themselves for HIV through a saliva sample.

Last year it distributed 41,053 such kits in Lusaka and Western provinces and identified 1,025 clients as new positives. This helped prompt the provision of anti-retroviral therapy to

209,983 people, of which 8,642 were children below 15 years old.

Dr Sikazwe goes on to introduce the concept of the last mile, whereby CIDRZ is working to develop more patient-oriented ways of treating infectious diseases which can and should be eliminated in their entirety, HIV being one of them, along with the likes of malaria and polio.

“The last mile initiative involves different stakeholders and philanthropists coming together to help eradicate these diseases in the remaining populations that continue to suffer high rates of infection,” she explains. “My area of work focusses on eliminating the HIV epidemic and getting to a stage where the number of new infections falls below a certain level. This is similar to how we are judging the COVID-19 spread and the need for ‘R0’, or the reproductive value that tracks how many people on average will be infected for every person who has the disease, to be below one.

“The goalposts are forever moving with HIV, and my last mile is trying to assess the gap between diagnosis and access to treatment. And the treatment must be quality treatment, and centred around what is best for the patient – we are finding there is patient fatigue with the volume of visits and treatments, so we are working on how to keep them motivated and engaged, all the while keeping the disease suppressed.”

FIT FOR THE FUTURE

As well as project execution such as that described by Dr Sikazwe, training and development are an equally essential part of CIDRZ’s bid to fulfil its

mission of improving access to health-care in Zambia.

It has a dedicated training unit which implements various programmes to help educate the wider population, while a series of fellowship schemes help it to utilise the talent of medical students.

For example, the CIDRZ-HealthCorps Fellowship is a prestigious and a highly competitive year-long programme which enrolls candidates from various fields of study from local or international universities. Successful candidates must carry MSc or MPH qualifications and are matched to specific projects at CIDRZ which helps them identify their career interests.

“A cherished goal of the CIDRZ-HealthCorps fellowship is to expose graduates and soon to graduate fellows to real life research and implementation science, and offer hands on experience which allows them to sharpen their career trajectory,” Dr Sikazwe says.

“The fellowship period is also dedicated to help fellows nurture their career development ideas, with special attention given to opportunities for PhD training as a possible next step.”

Nine fellows are currently on track in this year’s cycle, the tenth year it has been in operation, with each fellow receiving an all-inclusive grant of \$2,000 per month.



A major focus for CIDRZ and Dr Sikazwe is to develop patient-centred solutions and treatments to diseases. HIV is a particular focus, with patient fatigued identified as a problem that needs to be overcome



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The next step, as identified by the CEO, is the CIDRZ PhD Fellowship.

Here, the purpose is to create a mechanism to identify and maintain exceptional fellows who embark on PhD academic training, and ensure their research is linked to ongoing activities at CIDRZ, with remuneration being calculated on a project by project basis.

Candidates can engage in a number of ways through the University of Zambia and international universities, as well as distance learning such as the UK's Open University. Currently, CIDRZ has 12 PhD candidates progressing well in their research, with a healthy number going through the application process.

The organisation also offers MSc training through distance learning or enrolment with the University of Zambia, with seven fellows currently supported after four completed the programme last year. Further still, internships are another way in which CIDRZ engages students, these programmes lasting up to six months and seeing volunteer interns paired with

mentors to gain hands-on experience in the field.

These fellowship and training endeavours highlight the importance of collaboration with external parties to CIDRZ, be it universities, governmental bodies, or other valued partners.

Indeed, Dr Sikazwe is quick to highlight the crucial part that this partnership network plays in the ongoing success of the group.

“Our partners are critical to our success and collaborations enable us to bring in fresh perspectives and strategies for implementing and improving health outcomes in Zambia,” she adds.

“We believe in having open strategic communication with partners, both international and locally, to look at how we best complement each other to meet our respective goals. There has to be a shared vision and a passion for the work at hand. We strongly believe in partnerships or collaborations that have a vested interest in growing the human resource capability of CIDRZ staff or Zambians, while pursuing the goal of any funding opportunity.

“Ultimately, the collaboration should result in improvement in the delivery of health services or generation of information that adds to the body of knowledge. Lastly, our partnerships should be complimentary and enable us to be most competitive with the various funders.”

Such collaborations will be of vital importance as CIDRZ enters the next chapter of its development.

The immediate priority for Dr Sikazwe is to leverage the organisation's resources and knowledge to help tackle the COVID-19 pandemic, its testing capability likely to be crucial in this ongoing national effort.

Beyond this, the CEO looks forward to making progress on a number of other projects, as well as continuing the remarkable success rate when it comes to securing new grants. However, she is the first to admit that the way CIDRZ does business will be different, concluding the conversation by outlining some of the organisation's plans for the near-term future.

“We are having to put some trials on hold and rethink how we continue to carry out research in this environment,” she says. “Our research agenda will still evolve alongside the government's wider health agenda, but how we do this will change.

“Already we are changing how we interact with clients and partners, using mobile and remote communications technology, and enrolling patients into trials virtually. There are challenges, but also opportunities, and I look forward to seeing our work unfold.”



CENTRE FOR INFECTIOUS DISEASE RESEARCH IN ZAMBIA (CIDRZ)

Tel: +260 211 242 257/58/59
info@cidrz.org
www.cidrz.org



**CENTRE FOR INFECTIOUS DISEASE
RESEARCH IN ZAMBIA (CIDRZ)**

CIDRZ Head Office,
Plot 34620,
Off Alick Nkhata Road,
Mass Media
Lusaka, Zambia.

Reception: +260 211 242 257/58/59
Mobile: 0950 693971, 0966 661417

Enquiries: info@cidrz.org
Jobs: jobs@cidrz.org
Internships: internships@cidrz.org
www.cidrz.org



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