MAKERERE UNIVERSITY

Infectious Diseases Institute

College of Health Sciences

Makerere University

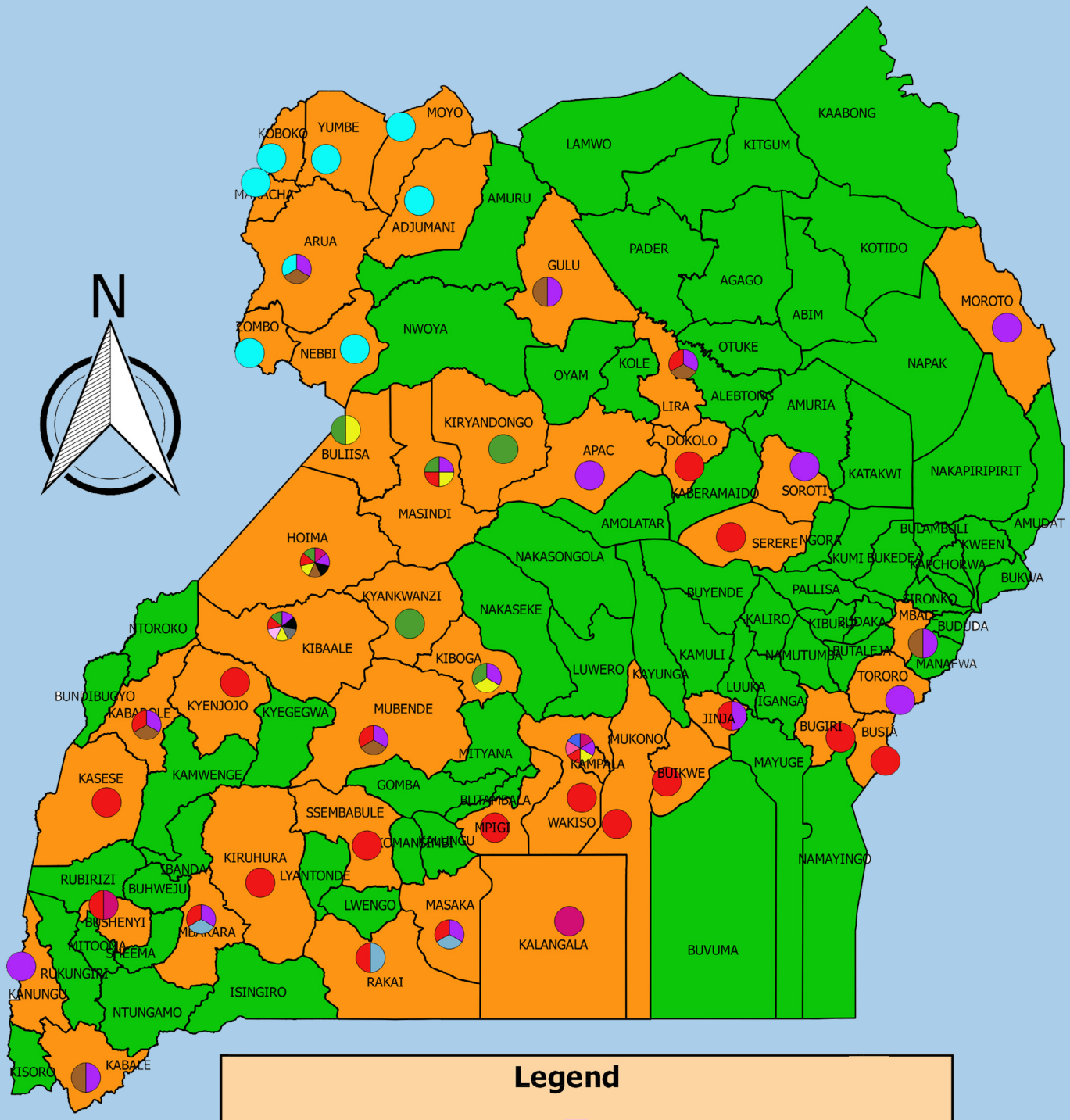
INFECTIOUS DISEASES INSTITUTE

2017 ANNUAL REPORT

JULY 2016 - JUNE 2017

Our Coverage

Ugandan districts in which IDI is active: 55% population covered (at June 2017)



Legend

IDI Projects

- IDI Projects
- IDI
- CDC-Kampala Capital City Authority
- CDC-Bunyoro
- CDC-West Nile Project
- USAID-Uganda Private Health Support Program
- CDC- Maternal Child Health
- CDC- Safe Male Circumcission
- CDC- Sharing HIV/AIDS Responsibilities and Efforts
- ELMA-New Born Project
- Elton John AIDS Foundation
- NIH- International Epidemiology Databases to Evaluate AIDS
- CDC- Global Health Security Agenda
- J&J- Uganda Academy for Health Innovation & Impact

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Message from our Leadership

IDI Board Chair

Welcome to this year's Infectious Diseases Institute (IDI) Annual Report covering the year to June 2017 which saw some significant developments at IDI. In terms of governance, there was a substantial change in Board membership; with full recognition of the outstanding contributions from several long-serving members who have guided IDI over the years with responsibility and integrity; and a warm welcome to those joining.

The year saw important developments across all the IDI main programmes in line with the IDI Strategic Plan (with over 90 projects in progress at the end of the year) while also maintaining financial stability. The IDI programmes (Research; Training; Prevention, Care and Treatment; Laboratory Services; Outreach; plus, Global Health Security) support Government of Uganda policies, strategies and priorities, at national and local levels; and IDI staff contribute to the further development of such policies, strategies and priorities when appropriate. IDI has a mission to strengthen health systems and has maintained unwavering focus on that goal during the year.

IDI enjoys no core funding or financial safety net and so a strong financial performance backed by substantial reserves is vital as IDI seeks to achieve its programmatic objectives while being ready for any major unforeseen changes in the funding environment or other adverse circumstance. The broad funding base protects IDI from certain risks, but also brings the challenge of compliance with the requirements of many funders.

IDI is proud to be an integral part of the College of Health Sciences at Makerere University and seeks to support the University at all times and to enhance its reputation and ranking in Africa and globally (especially in terms of publications).

Rev. Prof. Samuel Luboga

IDI Executive Director

The year to June 2017 was a year of continuity, but also of considerable change at IDI. The Research programme continued to produce about a publication per week on average; the Prevention, Care and Treatment programme in the IDI clinic continued to expand its specialised services along with undertaking a major patient safety initiative; the Training programme trained record numbers as well as progressing strongly with the eLearning initiative; the MUJHU Core Lab (Makerere University – Johns Hopkins University) prepared for possible transition to IDI; and IDI involvement in Global Health Security received a major boost with the Joint Medical Emergency Disease Intervention Clinical Capability program in partnership with the Makerere University – Walter Reed Project in western Uganda. The mid-term review of the IDI Strategic Plan during the year led to the recognition that Bio-Informatics and Global Health Security are likely to be priority areas for strategic growth at the Institute.

This year also saw a major expansion of IDI outreach activities with the award by the US Center for Disease Control & Prevention (CDC) to IDI of the project entitled: *Accelerating epidemic control in Kampala region of Uganda through scale up of evidence based and high impact interventions towards achievement of UNAIDS 90:90:90 targets*. This large award entrusted IDI with heavy responsibilities related to the coordinated managerial oversight of the CDC-funded HIV/AIDS services in Kampala/Wakiso including substantial sub-granting responsibilities. IDI is now the lead Implementing Partner in three of the seven CDC-supported regions in Uganda.

These achievements would have been impossible without the support of the Government of Uganda, Makerere University, our development partners, and our funders; to all of whom we express sincere gratitude.

Richard Brough PhD

Key Facts

153,145
PEOPLE LIVING WITH HIV SUPPORTED THROUGH OUTREACH PROGRAMME (at June 2017)

24,267
TRAINEES (since 2002)

528
CUMULATIVE PUBLISHED RESEARCH ARTICLES (at June 2017)

902
NUMBER OF FULL-TIME EMPLOYEES

7,625
ACTIVE HIV CLIENTS AT THE IDI MULAGO REFERRAL CLINIC (at June 2017)

264,402
MALES CIRCUMCISED (since 2011)

6,671
WOMEN RECEIVING PMTCT (at June 2017)

95
PROJECTS RUNNING CONCURRENTLY AT IDI (at June 2017)

7 thousand

over 7,000 total active HIV clients at IDI Mulago referral clinic

Prevention, Care & Treatment Programme

Our Prevention, Care and Treatment (PCT) programme is dedicated to providing high quality multidisciplinary care through sustainable and innovative systems, which can be used for research and capacity building.

Quality Services for HIV

The programme houses an Adult Infectious Diseases Clinic (AIDC) in Mulago accredited by the Ministry of Health (MoH) of Uganda as a provider of specialised services for HIV. In June 2017, approximately 7,600 patients were in care with 20% of patients receiving 2nd line antiretroviral therapy (ART) regimens. Our clinic provides differentiated care through specialised clinics and this year new investments were made to strengthen services for vulnerable patient sub-groups for example critically ill patients. We engage specialised physicians in internal medicine, obstetrics, gynecology and urology to address complex and acute medical conditions.

With support from World Health Organization Tropical Diseases Research (WHO TDR) and European and Developing Countries Clinical Trials Partnership (EDCTP), the clinic improved its capacity to address a wide range of medical emergencies through staff training and enhancements to the Urgent Care section which included installation of piped oxygen, a fully-equipped emergency trolley, a state-of-the-art ultrasound machine and acquisition of robust ambulance services for patient transportation.

Moving forward, with funding from the United States Center for Disease Control and Prevention (CDC) Kampala Wakiso Project, the clinic will prioritize facility-based and community-based strategies to identify, treat and retain in care patients; with a focus on underrepresented groups including men as well as implementing a model for routine screening for sexually transmitted infections for selected patient groups.

A Clinic Platform for Treatment Optimization

Our PCT programme also provides a platform for clinical research aimed at improving treatment outcomes for patients receiving ART. With support from University of Liverpool, UNITAID, ViiV, St Stephen's AIDS Trust and the Clinton Health Access Initiative the clinic has received resources to conduct studies to better understand how to use dolutegravir and a lower dose of efavirenz (400 mg in adults) as drug options for HIV treatment in real-world settings. For example, one of our studies seeks to understand whether a change to the dose of dolutegravir is needed when patients are using recommended antimalarial drugs and another seeks to determine whether women in late pregnancy require different doses of efavirenz or dolutegravir. These studies will generate a significant body of evidence that is of interest to national and international stakeholders to inform treatment policy for HIV in developing countries.

The Ugandan Academy for Health Innovation and Impact

During this year the Academy has continued to implement new projects which contribute to the Academy's mission to improve health outcomes through innovations. The Academy has built up a diverse range of projects across clinical care, capacity building, systems strengthening and research.

Working to achieve the Academy Strategic Plan using the partnership and resource generation frameworks launched this year, we have grown the Academy from 3 to 11 projects overall; 5 in clinical management, 2 in research and 3 capacity building projects. This has been achieved through a rigorous sub-granting selection process, through which we have generated interest by 36 organisations including academic institutions, and national non-governmental and community based organisations.

The Academy secretariat with the IDI grants and finance department have worked hand in hand with the 6 selected sub-granted organisations to develop their project plans and to build capacity of the smaller organisations where required. In clinical care, we added 4 sub-grantee projects to the Call for Life Lite mHealth HIV adherence support demonstration project. Between them they have reached over 7,300 beneficiaries. Innovations range from high tech including the Call for Life treatment support technology and Integrated Community Based Initiatives electronic case based surveillance technology, to lower technology solutions such as Hoima Caritas Development Organization locally produced washing shelter to improve personal hygiene. Child and Family Foundation are doing great work screening at risk children for TB, HIV and malnutrition in Kampala; and Sustainable Development Initiatives have established themselves in the hard to reach Bufumbira Island in Kalangala district.

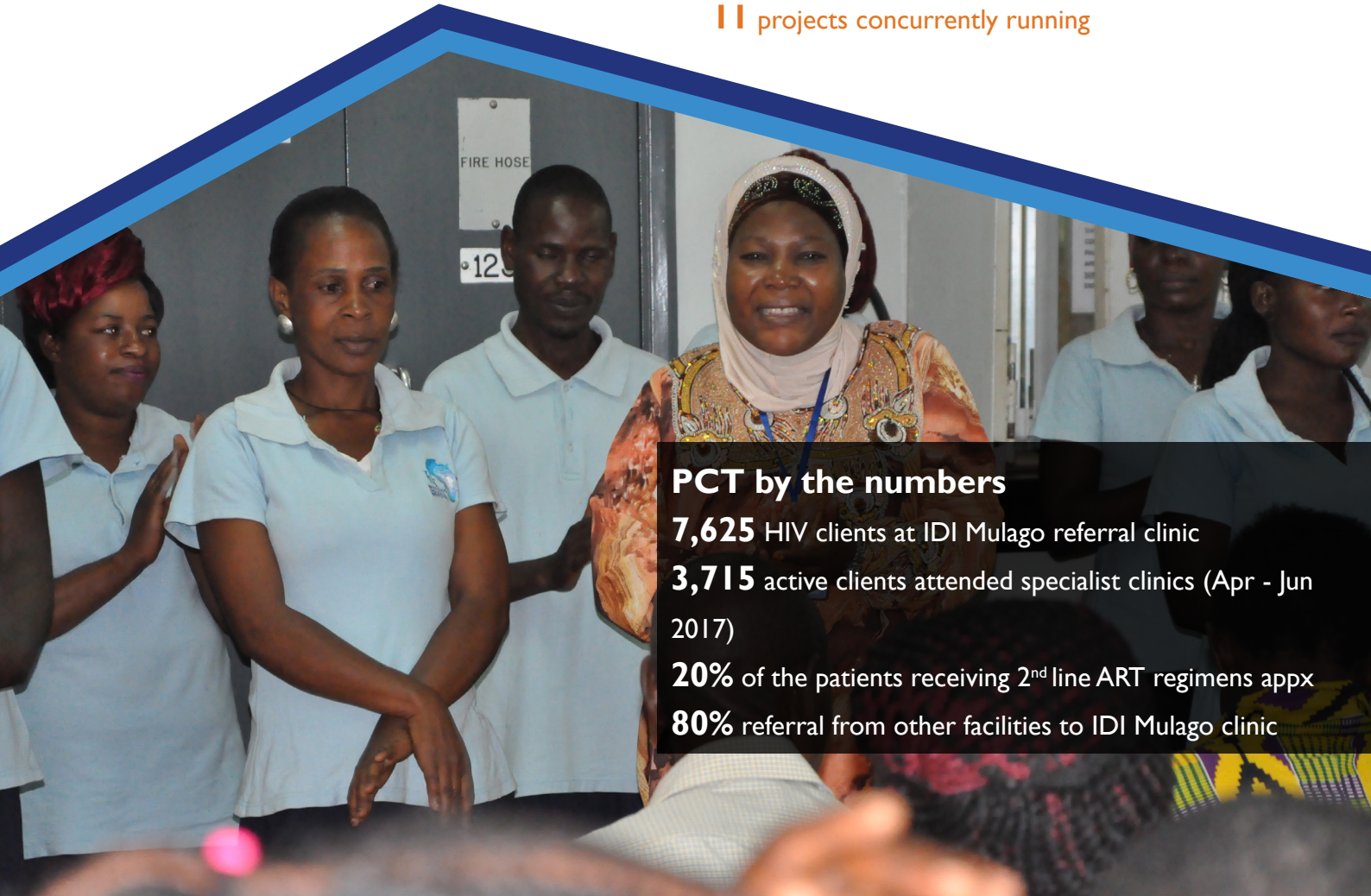
In capacity building, the Advanced Treatment Information Centre (ATIC) demonstration project has gone from strength to strength, with a 40% increase in the number of calls and over 2,500 health care workers accessing our on-line tools. The AIDS Support Organisation has established pre-service training and mentorship for doctors and nurses across Uganda through its training sites, and we had our first Uganda PhD scholar graduate from the University of Antwerp. The research projects are underway with most of the 395 enrolled Call for Life participants reaching 6 month follow up, and the Makerere School of Public Health evaluation of generic Pre-exposure prophylaxis is set to start enrollment in the first quarter of 2017-18.

Academy by the numbers

7,300 beneficiaries

2,500 health care workers accessing on-line tools

11 projects concurrently running



PCT by the numbers

7,625 HIV clients at IDI Mulago referral clinic

3,715 active clients attended specialist clinics (Apr - Jun 2017)

20% of the patients receiving 2nd line ART regimens appx

80% referral from other facilities to IDI Mulago clinic

24 thousand

over 24,000 health care workers trained by IDI training programme

Training & Capacity Development Programme

The Training programme at IDI, is committed to teaching and to building the capacity of health care workers in Africa, for the prevention and management of HIV and other infectious diseases.

This year, we conducted trainings in the areas of HIV, malaria, pathogens of security concern (such as Ebola), laboratory management, biosafety & biosecurity, research, and systems strengthening for Ugandan health workers, using face-to-face and online methods of training. The medical and dental officers who attended these trainings accrued Continuing Professional Development (CPD) points that facilitated renewal of their Annual Practicing Licenses.

Our courses are facilitated by seasoned national and international trainers and the quality of courses has been maintained over the years by the continuous review and update of content. Besides offering mentorship to our alumni, we also provide distance post-training support through our 24-hour toll free Advanced Treatment Information Centre (ATIC).

Our capacity building activities are needs driven, hands-on and are aligned to national and international policy guidelines and various partners have played a pivotal role in the implementation of our activities this year. See below some of our achievements.

Global Health Security Agenda (GHSA)

We continued to implement capacity building activities for the five-year CDC-funded Global Health Security Partner Engagement Project, where we expanded efforts and strategies to protect and improve public health regionally. The project aims to strengthen Uganda's ability to prevent and detect emerging infectious diseases, with a focus on: biosafety and biosecurity (BS&BS), infection prevention and control, surveillance and prevention of antimicrobial resistance, antimicrobial stewardship, strengthening of lab systems, and acute febrile illness. To achieve these aims, we led the following processes;

- Development of three national BS&BS curricula namely; the leadership & management track, laboratory technical track and the basic track.
- Implementation of service provider trainings in leadership & management, basic and lab tracks of BS&BS.
- Implementation of Infection Prevention and Control (IPC) trainings for several regional referral hospitals to support functionality of IPC committees.
- Provision of technical assistance in various key GHSA priority areas to the Uganda National Health Lab Services, regional referral hospitals, and various health centers in Kampala.
- Facilitation of emergency preparedness and response IPC and Viral Hemorrhagic Fever (VHF) management trainings for hospitals in epidemic prone districts

in support of MoH efforts to prevent and control outbreaks of diseases of biosecurity concern.

Malaria Action Program for Districts (MAPD) project

In August 2016, IDI was subcontracted by Malaria Consortium to join a consortium of five partners and jointly implement the Malaria Action Program for Districts (MAPD); a five-year project funded by USAID/President's Malaria Initiative.

The project aims to improve the health of Ugandans in 48 districts by reducing childhood and maternal morbidity and mortality due to malaria; and to minimize the social impact and economic losses for those affected.

Thus far during implementation, with the support of our partners, we have strengthened malaria lab diagnosis by managing the External Quality control and Assurance for malaria microscopy to include Rapid Diagnostic Tests, training and mentoring of lab personnel.

We recruited four malaria lab diagnosis experts currently placed in the four regions of project operation and adapted a cost effective "low dose high frequency" (LDHF) malaria microscopy curriculum which will facilitate integration of malaria microscopy into the health facility during mentorship visits.

eLearning

Continued Expansion/ growth of the IDI Distance Learning Platform:

With continued funding by Janssen Global Public Health through the Johnson & Johnson Corporate Citizenship Trust, IDI in partnership with the Ugandan Academy for Health Innovation and Impact has further enhanced its capacity to deliver quality eLearning opportunities to health workers.

Our clinical training website (https://elearning.idi.co.ug/) now hosts free online educational resources including 32 case studies developed rigorously to meet international standards, treatment guidelines, and short courses. The website tracks activities including assessment scores of learners and allows those who pass to download e-certificates. Through this process, learners earn CPD points acceptable to the Ugandan MoH for annual renewal of practicing licenses.

Online Training Needs Assessment

We conducted a phone call based training needs assessment among 400 in-service health workers to inform our delivery of CPD activities. The assessment revealed that the classroom was the most preferred model for CPD delivery with 50% in favor, followed by 29% in favor of facility-based sessions and 20% in favor of online classes. Most popular topics included HIV, TB and malaria with 56% willing to meet the financial requirements of a week-long CPD activity.

24,267 health care workers trained since 2002

12,925 queries answered through ATIC since 2004

21 trainees from outside of Africa during the year

42 districts across Uganda supported during the year

5 hundred

over 500 cumulative research articles published in peer reviewed journals

Research Programme

The hallmark of the IDI Research programme is the focus on influencing policy and practice in Africa, while simultaneously enhancing the local (African) research capacity. Research teams tackle disease-specific research questions, in collaboration with international partners, and mentor scholars in this environment. The nidus of the research portfolio remains HIV/AIDS and related infections, but there has been a deliberate expansion of the programme to other disease areas including infection-related malignancies and emerging infectious diseases (EIDs).

The year 2016/2017 has seen a number of achievements by the research programme including our 500th publication in a peer-reviewed journal in April 2017.

With support from the Gilead-funded research capacity grant through Africare - IDI's US- based institutional partner - IDI has made an initial modest investment in bio-informatics. The Research programme has supported Ms. Ninsiima to undertake training in this field (Master of Science) in the UK.

The Research programme also broadened its implementation science (ImS) studies portfolio which now includes the CDC-funded Sharing HIV/AIDS Responsibilities and Efforts (SHARE) and MENTORS studies; as well as the USAID-funded project HEARD (Health Evaluation, and Applied Research Development).

The Research Capacity Building Unit introduced an Emerging Research Mentorship Model - a forum called the 'IDI PhD Club' which is a bi-annual PhD scholars meeting where participants receive feedback on their work by senior research fellows and provide advice to one another.

In addition, three IDI-based scientists won significant career-development research grants namely: the two National Institutes of Health (NIH) K43 Emerging Leader Awards (to Drs. Andrew Mujugira and Abdu Musubire) and EDCTP Fellowships (to Drs. Agnes Kiragga and Stephen Walimbwa).

In order to manage research risk, our governance framework was strengthened with the introduction of an electronic Regulatory Information System (RIS) which monitors and centralizes the regulatory documentation of the over 54 active research projects. It also allows for notification of pending approval expiry and escalation to concerned parties as needed. Compliance was also reinforced by appointing a regulatory-focused pharmacist and a Clinical Trials Quality Manager.

In a bid to strengthen Statistical Capacity, the Statistics and Data Management Unit members attended courses in advanced statistical analytical skills in infectious diseases modeling at Moi University, Kenya and Harvard University, USA. The Unit also supported a training in methods for handling missing data which attracted participants from within the College of Health Sciences, Makerere and also from the Medical Research Council (MRC) Uganda Research Unit in Entebbe.

IDI publications in peer-reviewed journals numbered 528 as at 30 June 2017 with 47 research projects active at IDI at that date including 17 observational studies, 11 clinical trials and 19 capacity building projects. In the year 2016/2017, 45 studies were reviewed by the IDI Scientific Review Committee which included 10 clinical trials, 23 observational studies and 12 student projects.

With support from NIH-funded U54 programs in HIV and Malignancies (PIs J Martin and G Kirk), as well as the JHU D43 on HIV and co-infections (PI Y Manabe), the Capacity Building Unit provided support to 31 scientists/scholars categorized as 1 post doc fellow, 6 PhD students, 5 senior fellows, 9 master students, 6 international undergraduate students, and 4 international pre-med students. The Unit also organised 62 research forum sessions with 1,272 documented attendees.

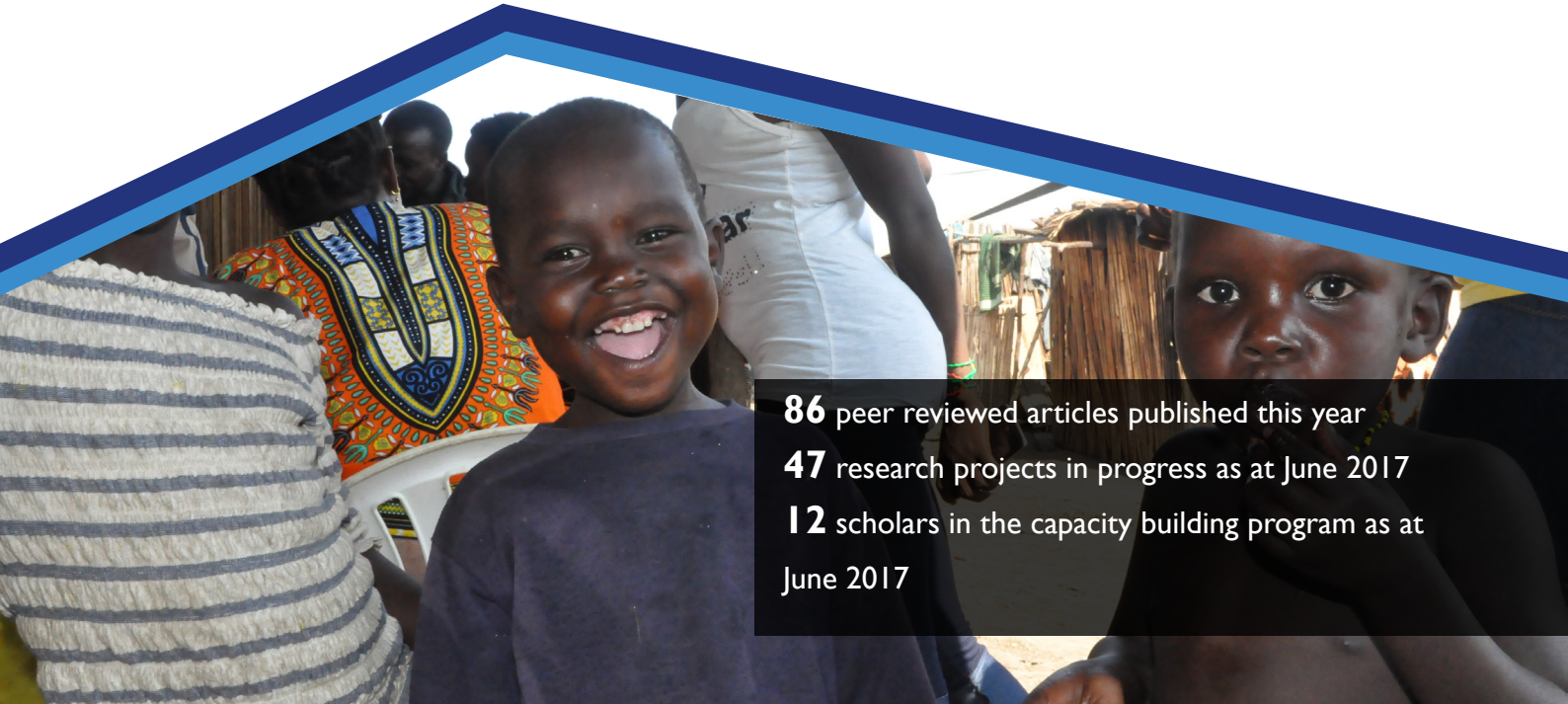
The Statistics and Data Management Outputs Unit processed 40 work requests for statistical analysis by both local and international scientists. Unit staff presented 7 abstracts at scientific conferences. The Unit facilitated the acquisition of an institutional license for a new database management software (REDCap) and currently supports 3 studies with this technology.

In the coming financial year 2017/2018, the Research programme will continue to make investment in bio-informatics capacity by facilitating the establishment of a bio-informatics centre at the IDI McKinnell Centre on the Makerere University main campus. In preparation for early phase (phase I and II) clinical trials, the research office will strengthen quality management and assurance through training and mentorship. The Research Capacity Building Unit will promote peer-to-peer mentorship among senior fellow researchers which will enhance internal capacity for the supervision of PhD and master students.

Focus on a Research Collaboration - the IDI - University of Zürich (UZH) Partnership

This partnership is part of the wider collaboration between Makerere University and the University of Zürich, which was established through an MOU in 2011. Since 2013, the IDI-UZH partnership has focused on HIV and TB co-infection and currently has the following key outputs:

- seven peer-reviewed publications and numerous scientific presentations at international and local conferences
- Human capacity development: for Uganda: 1 PhD student and 1 MS student supported; and for Switzerland: 5 doctoral theses and 3 MSc theses have been supported by the collaboration.
- Lab infrastructure: UZH donated a high-performance liquid chromatography (HPLC) machine and a mass spectrometer is due shortly; this has contributed to capacity for pharmacokinetics (drug interaction) studies at Makerere University.
- Clinical care improvement: The collaboration has contributed to improving clinical care principally by compiling an orientation guide/manual for interns (doctors in training) for use on the medical wards at Mulago and Kiruddu hospitals.
- Additional research activities: The collaboration has extended research activities beyond HIV-TB co-infection and is sponsoring studies in antimicrobial resistance (urinary tract and sexually transmitted infections) as well as non-communicable diseases in HIV-settings (diabetes mellitus).
- In November 2017, Makerere University College of Health Sciences (MakCHS) will host the 3rd MAK-UZH symposium. The first and second were held in Kampala and Zürich respectively. This symposium which is titled Dialogue Days, will seek to provide a platform for Ugandan academics at MakCHS and their Swiss counterparts to interact and share ideas about collaboration in the areas of research, clinical practice and education/teaching. Utilising the momentum and example of the collaboration in the field of infectious diseases, academics in other fields of medicine and public health will explore opportunities to broaden the collaboration.



86 peer reviewed articles published this year

47 research projects in progress as at June 2017

12 scholars in the capacity building program as at June 2017

Outreach Programme

Our Outreach programme is devoted to increasing access to quality and comprehensive services for HIV and other infectious diseases in Uganda through innovative and strengthened health systems. We use a district-wide Health Systems Strengthening (HSS) approach across all our programmes.

This year, we have made great strides in increasing access to HIV services for the Ugandan people. Our efforts are in line with the UNAIDS 90-90-90 strategy, PEPFAR 3.0, and the Ugandan MoH goals of controlling the HIV epidemic towards an AIDS free generation.

According to the Presidential Emergency Plan for AIDS Relief (PEPFAR) regional rationalization structure, we are currently the lead implementing partner for comprehensive HIV/AIDS services in Mid-Western Uganda (7 districts), West Nile region of Uganda (9 districts) and Kampala region (covering Kampala and Wakiso districts). At end of June 2017, over 150,000 People Living with HIV were being supported across the three regions by IDI and its many partners. Additionally, we are the lead implementing partner for Maternal, New born and Child Health services under the Saving Mothers Giving Life project in the districts of Kibaale, Kagadi and Kakumiro.

We rolled out the "Test and Treat" approach to all supported regions and provided HIV testing services to over 250,000 clients across the regions with a focus on key and priority populations for example truckers to ensure maximum yield. We have also rolled out HIV partner testing services (using the index tested partner for follow up) in Mid-Western Uganda with positivity yields as high as 35%.

We recognize that in this new age, it is imperative that we think outside the box. As such, we have introduced various innovative approaches to meet our clients' needs. We have rolled out several differentiated HIV service delivery models across the programme to meet the demands of various stable ART clients. Our goal is to improve adherence and treatment outcomes. Models include the "community pharmacy" and the "fast track refill model" that are increasingly gaining appreciation by our clients. The community private pharmacy ART refill program (clients pick their refills from private pharmacies with supervision) has helped to improve drug access for HIV clients and is easing overcrowding in heavily used health facilities in Kampala.

One of the clients under this program had these comments about the community refill program during a visit to one of the Kampala private pharmacy refill centers by Steven Wiersma, the former CDC Uganda Country Director, *"The experience is simply wonderful. I spend 15 to 20 minutes at the pharmacy. The nurse is very attentive and I can ask many questions. At first, we thought it was a conspiracy to get rid of us. But I have seen how well it works".*

The CDC-funded *Accelerating epidemic control in Kampala region of Uganda through scale up of evidence based and high impact interventions towards achievement of UNAIDS 90:90:90 targets* (Kampala Wakiso) project was initiated in April 2017 and is currently being implemented. Critical to success is partner engagement of the many consortium members and stakeholders to ensure uninterrupted continuity of patient services as part of the transition processes involving PEPFAR-funded CDC and USAID sub-partners in line with geographical rationalization.

We have also continued to support Voluntary Medical Male Circumcision which is a WHO recommended procedure to prevent the transmission of HIV. In the year to June 2017, a total of 52,407 males above the age of 10 were circumcised. Cumulatively, we have circumcised 264,402 males for HIV prevention.

Currently, viral load access across the programmes is at more than 70% for all eligible clients across the different supported regions.

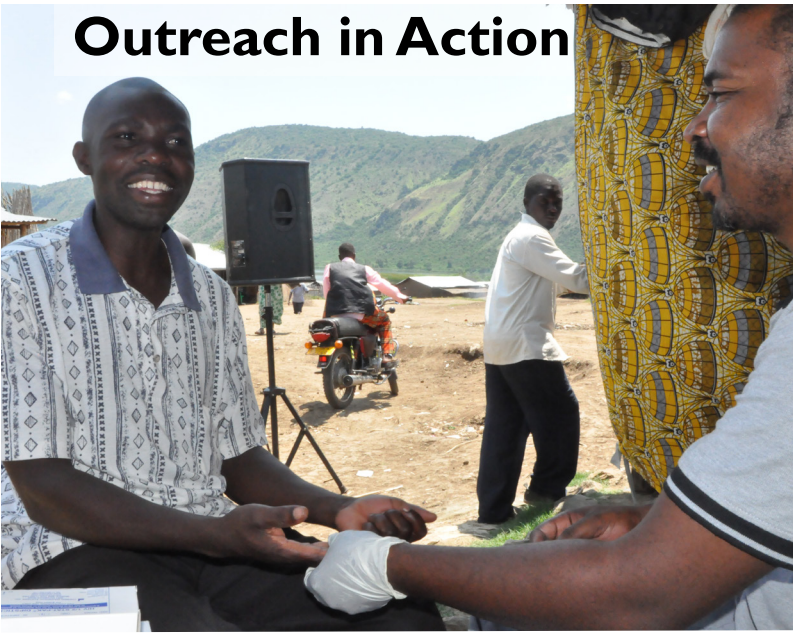
Over the next year, in line with the "Test and Treat" approach, we will continue to consolidate the gains made thus far to ensure access to ART by all clients not yet enrolled into care. We will also continue support for interventions aimed at identifying all remaining HIV clients, linking them to care, ensuring they remain on treatment as well as remain virally suppressed. We will also take every opportunity to innovate responsibly.

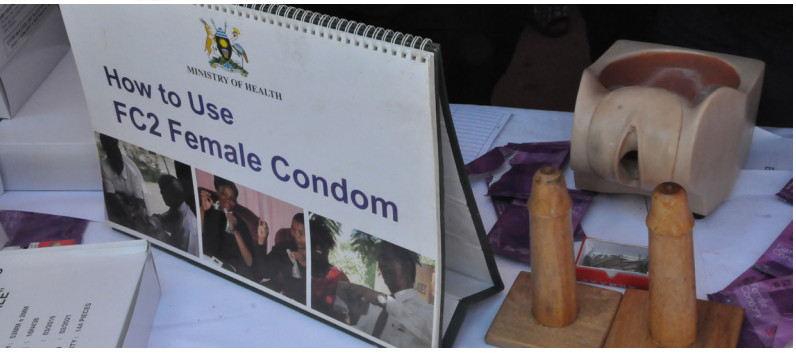
153,145 People Living with HIV supported through the Outreach Programme

264, 202 men circumcised cumulatively

77,994 pregnant mothers tested for HIV cumulatively

Outreach in Action





5 hundred

over 500 individuals trained in biosecurity & biosafety, as well as prevention of AMR

Global Health Security Programme

With support from CDC and in partnership with the Government of Uganda we are implementing the Global Health Security Partner Engagement Project (GHSP) which aims to strengthen Uganda's capacity to prevent, detect and respond to biologic threats.

This year, the Ugandan MoH convened the First Regional Biosecurity conference in Kampala with support from the Dutch National Institute for Public Health and the Environment (RIVM). The conference created awareness and generated discussion on policy and legislation, multi-sectoral collaboration, prevention of bio-terrorism and safe transfer of biological agents. We also supported the registration and launch of the Biosafety and Biosecurity Association of Uganda to support a network of human and veterinary experts in biosafety and biosecurity.

In order not to undermine efforts to achieve the UN Sustainable Development Goals, we supported the development of the National Antimicrobial Resistance Surveillance Plan for human health which strengthened the capacity for microbiology at the Uganda National Health Laboratory Services where two surveillance protocols are being implemented. In partnership with the Department of Medical Microbiology, Infectious Diseases Research Collaboration, CDC and MoH, 8 hospitals across Uganda are under surveillance to identify organisms causing fever in children and over 2,200 blood cultures were performed to identify bacterial causes. Our partnership with the National Sexually Transmitted Infections Program, has initiated surveillance for antibiotic resistance among men presenting with gonorrhea, a disease caused by a pathogen that the WHO declared to be a priority pathogen for antimicrobial resistance. Since inception in September 2016, over 260 samples were obtained from 6 clinical sites in Kampala. Both projects will determine the patterns of antibiotic resistance in Uganda thereby guiding public health interventions and informing treatment policy. [*Ref. pg8 for training related achievements*]

Joint Mobile Emerging Disease Intervention Clinical Capability (JMEDICC)

Clinical Research during Viral Hemorrhagic Fever Outbreaks

Uganda has experienced several outbreaks caused by Ebola and Marburg viruses. This year, we joined the Joint Mobile Emerging Disease Intervention Clinical Capability (JMEDICC) consortium in collaboration with Makerere University Walter Reed Project (MUWRP) and United States Department of Defense partners to establish a pilot demonstration of clinical research capabilities to improve sepsis patient management and build capacity to conduct therapeutic research in a filovirus outbreak setting. In the initial phase, research capability is being established at Fort Portal regional referral hospital to improve : 1) clinical capacity to identify and manage potential research participants through training of clinical staff; 2) laboratory capacity through lab renovations, provision of equipment, and training of lab staff; and 3) clinical research capability through renovations of an isolation research ward and

research staff hires. In the program, we support clinical care, infection prevention and control and microbiology efforts with 12 full-time staff based at the Fort Portal regional referral hospital.

IDI visits Jomorogo health centre III in Bidi Bidi refugee settlement

Dr. Lamorde of IDI presents a poster on acute febrile illness at Kiswa health centre III

Outbreak simulation at Kiswa health centre III ahead of Global Health Security Agenda Ministerial meeting

American Ambassador to Uganda and Global CDC Director participate in GHS outbreak simulation at Kiswa health centre III

Laboratory Services

The Makerere University – Johns Hopkins University (MU-JHU) Core Lab is housed at IDI and has very close links with the Institute. It was established in 1989 and aspires to be the leading diagnostic, research, and clinical reference lab in Africa. It was the first lab in Sub-Saharan Africa to attain the College of American Pathologists (CAP) excellence certification and has successfully maintained and exceeded expectations through successive re-certification audits every two years; the most recent having been accomplished in June 2017. This demonstrates the commitment by the lab leadership team and staff to ensure sustainable quality practice to international standards.

This year, MU-JHU Core Lab staff have performed over 100,000 tests along with the following achievements:
In the year in which the "Test and Treat" policy was initiated, the lab introduced HIV Drug Resistance Testing (HIVDRT) services to help clinicians detect and address resistance to ART regimens, now estimated to be experienced by about 10% of persons initiated on ART. Expansion of these services will strengthen capacity, provision, access and utilization of HIVDRT to meet the national demand thereby reducing HIV related incidences, morbidity and mortality.

We acquired an Abbott Real-time M2000 instrument in addition to the already existing Cobas Taqman/Cobas Ampliprep molecular testing instrument which will improve the variety of molecular testing options available for our clients.

In December 2016, MU-JHU Core Lab received the prestigious continental "Best Practice in Laboratory Medicine" award which recognises "world-class monitoring and appraisal of tailored quality indicators" from the African Society of Laboratory Medicine (ASLM) in Cape Town, South Africa. The award is for sustained lab improvement/best practices which lead to tangible and replicable outcomes for enhanced quality in lab systems and patient care. In addition, Dr. Jane Ruth Acheng the Ugandan Minister for Health formally recognized and appreciated this achievement which is proof of the capacity of MU-JHU Core Lab as an African leader in lab practice initiatives.
MU-JHU Core lab attained 99.4% average score overall in External Quality Assessment in the period of June 2016 – June 2017. EQA scores are an indicator of the analytical accuracy of a lab and the effectiveness/reliability of its total testing process.

In 2015, MU-JHU Core Lab initiated a cash lab to meet the growing needs of the local population (mostly walk-in clients). Located within the Central lab, next to IDI phlebotomy room, the cash lab offers prepaid sample testing services for a variety of tests in real time. Over time, the volume has grown to about 160 tests per week by June 2017.

MUJHU Core Lab is sensitive to the views of its clients and runs periodic surveys. In the most recent biennial Customer Satisfaction Survey (CSS) in May 2017; 100% of respondents thought that MU-JHU Core Lab was a good lab overall, while 96% of respondents were satisfied with the lab testing quality overall.

Information Services

IDI's Information Services (IS) department designs and applies ICT (Information and Communications Technology) in the day to day running of the Institute so as to support data management with the goal of measuring progress, facilitating innovation and ultimately promoting efficient and effective health programme implementation.

2016/17 has witnessed notable achievements from the IS department which include, but are not limited to: Cloud migration of selected databases, connecting the periurban IDI Kasangati site to IDI's Wide Area Network, scaling up of IDI's automated timesheet system (ClockTime) by more than 80% to cover all IDI staff, and a major reorganization of the IDI Mulago data center.

This year, we choose to highlight the Cloud migration project where the IS department led a seamless process of data migration in its quest to maintain reliable, secure, accessible, and stable data infrastructure. The success in transition was largely attributed to the painstaking pre-migration planning that ensured solid technology and capacity readiness which took into consideration internet strength and reliability.

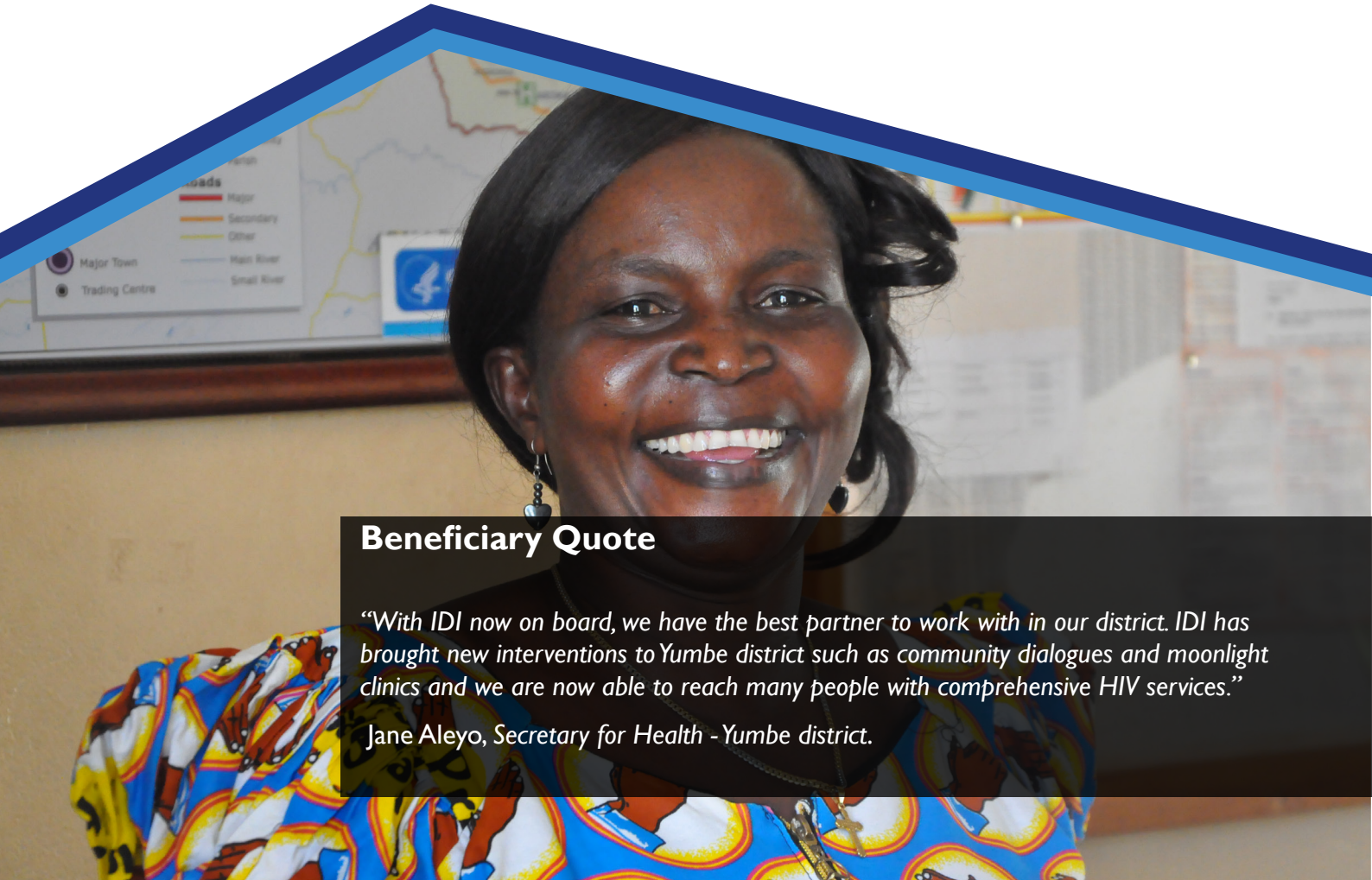
Possible adverse consequences of such a major strategic move (including complete system failures) were analysed in detail and mitigation/contingency measures considered and where practicable put in place. IDI evaluated a range of reliable Cloud providers and decided eventually to continue to work with Microsoft which has been (and continues to be) the provider of major software for IDI – including operating systems, productivity software, and the Enterprise Resource Planning (ERP) system (Microsoft Dynamics Nav).

Email and user data that was previously maintained on servers located at IDI is now maintained on the Microsoft Cloud platform, and the arrangement has easily surpassed the expected benefits and efficiencies. Our staff now access their email and data on the go and from anywhere in the world whereas with the previous system, access was much more constrained and any interruption to the local network infrastructure would likely affect access to emails.

Our provider promises 99% availability of the Cloud service, and provides a robust service level agreement.

In this initial phase of Cloud migration, only email and data backups have been transferred, along with the additional OneDrive system for accessing individual user files over the internet. Protecting data due to its sensitivity and confidentiality has been a paramount concern during what has proved to be a seamless data migration process (with IDI staff being largely unaware of the momentous changes taking place).

Moving forward, we plan to transition more of our custom systems and databases to the Cloud.



Beneficiary Quote

"With IDI now on board, we have the best partner to work with in our district. IDI has brought new interventions to Yumbe district such as community dialogues and moonlight clinics and we are now able to reach many people with comprehensive HIV services."

Jane Aleyo, *Secretary for Health - Yumbe district.*

Integrated Community Outreaches bring services closer to the people of Bujaaja village

"*One Wednesday morning in 2014, I heard the Bujaaja Parish coordinator announcing on a megaphone that IDI - Saving Mothers Giving Life (SMGL) project had organized a community outreach* [integrated static clinical outreach] *at the church and was bringing maternal neonatal health services including HIV testing services, antenatal care and immunization closer to the people,*" said Alice.

Alice, a 29-year-old woman and mother of three is married to Sarapiyo Ndunguse and lives in a remote area plagued by bad roads and therefore has limited access to health services. The closest health facility, Nkooko health centre (HC) III is 20 kilometers away. Alice had previously lost two babies, both delivered by a traditional birth attendant (TBA) in her sub county.

In order to prevent more mothers from losing their children at birth while preserving the health of the mothers, IDI-SMGL project, funded by the Center for Disease Control and Prevention (CDC), organized a community outreach providing maternal neonatal services to the women in Bujaaja village.

"*The Parish coordinator mobilized pregnant women, and mothers with babies in need of immunization as well as men to come to Bujaaja church for all those services,*" said Alice.

At that time, Alice was five months pregnant. At the outreach, Alice and other women received a health education talk, were registered before receiving services such as physical examinations, HTC services, and Tetanus Toxoid (TT) vaccination. Alice also received some medicine including that to prevent malaria during pregnancy and iron folic tablets to prevent anemia. Health workers advised her to return at seven months.

"*I honored the health worker's advice and returned at 7 months. Again, I received health education about the importance of antenatal care services (ANC) to pregnant mothers, birth preparedness, and the benefits of health facility delivery. We were also asked to come back with our partners at the next visit,*" said Alice.

On returning home, Alice urged Sarapiyo to accompany her for her next visit. At eight months, Alice returned to receive outreach services with her husband during which both tested for HIV as part of the ANC services package. Sarapiyo also joined a group of men who were separately receiving paternal health education about their roles and responsibilities in birth preparedness. Alice was then given a subsequent return date for her 4th visit which was not met because she went into labor early.

During labor, the couple wasted no time in travelling to Nkooko HC III, where Alice delivered a healthy baby girl – now three years old. As a result of the IDI led outreaches, since January 2016, 842 clients have received ANC and a total of 2,190 babies have been immunized in Bujaaja village.

"*I thought that TBAs were the direct representatives of health workers in the community until I was educated about the dangers of TBA delivery and the advantages of health facility delivery*", said Sarapiyo.

In September last year, Alice found out she was pregnant with her third child. During her pregnancy, Alice faithfully continued to attend community outreaches with the support of her husband. The couple engaged in early preparations for child birth and savings for transport to the HC before her anticipated delivery date of 15th May 2017.

"*We bought most of the things required for delivery like gloves, basin, kiveera, baby's clothes, bed sheets and saved some money for transport and emergencies at the health facility*", said Alice and her husband.

On Sunday 21st May, 2017 at Nkooko HC III, Alice gave birth to her 3rd child - a bouncing baby boy. She is so grateful to SMGL for providing accessible MNH services to her community. Alice currently has 3 children aged nine, three, and a newborn of 8 days, two of whom are fondly termed as SMGL children. "*We now have 2 children from the Bujaaja outreach services,*" says the proud couple.

IDI - SMGL project organized a community outreach providing maternal neonatal services to women in Bujaaja village

Sustainability of IDI

Implementation and monitoring of Strategic Plan 2013 to 2018

There have been a number of key strategic developments in IDI over the last year. Following the mid-term strategy review, key areas of potential strategic growth were identified as (1) emerging/re-emerging infectious diseases (EID)/Global Health Security (GHS); and (2) Bioinformatics. Over the year, IDI has sought to establish and/or strengthen core programmatic and management capacity in these two areas. In the area of EID/GHS, IDI is developing a full in-house team to lead and implement this rapidly growing sub-programme. This team will provide core expertise and support to IDI's current EID/GHS portfolio and provide a strategic direction for its growth. In the area of bio-informatics, IDI is in discussions with key potential funding and implementation partners to support the start-up of a specialized bio-informatics unit which would be housed at IDI, but would be a resource available for Makerere University as a whole. Preparations for the next strategic planning cycle (2018-2023) have begun.

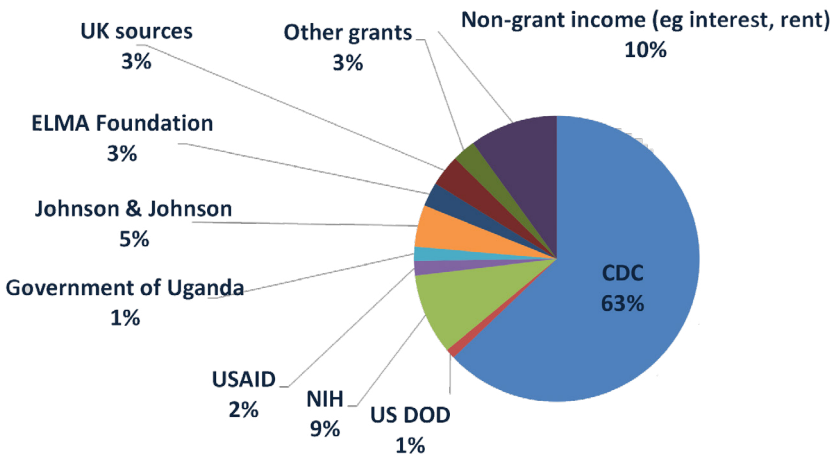
Strategic Information (SI)

The Strategic Information team continues to support new business acquisition as well to generate, collate, update and disseminate strategic management information at project and institutional levels covering both programme performance as well as the efficient and effective use of resources. The team introduced a prototype scorecard approach to institutional reporting in order to highlight how long term IDI programmatic trends, contributions and outcomes align with and support national health priorities. Specific monitors to track engagement with, and contributions to, key partners such as Makerere University, Mulago National referral hospital and the MoH were also developed and disseminated to enhance partner relationships. The team further designed new tools : (1) to inform performance and management decision making in nascent strategically important areas such as EID/GHS and Sub-granting; and (2) to improve routine financial performance monitoring by programme/departments within IDI. Over the next year, the team will provide support in incorporating measurement, monitoring and evaluation standards into the 2018-2023 strategic planning process.

Resource generation and management

Over 132 funding proposals with a grant/contract value of $252,013,967 were written during the last two years and a success rate of 21% by number (31% by value) was achieved. Major growth was registered in IDI sub-grants to other partners from 24 sub-grants worth $4m (July 2016) to about 67 sub-grants worth over $16.7m (July 2017) (170% growth by number; 318% growth by value). The department is hiring new staff and strengthening various supporting systems to manage this continuing trend. Notable new funding partners include: Janssen Pharmaceuticals (2 research contracts); the US Department of Defense Joint Mobile Emerging Disease Intervention Clinical Capability (JMEDICC) (a subcontract through Henry M Jackson Foundation and Makerere University Walter Reed project (MUWRP)); the University of Maryland (an NIH funded sub-grant); and the University of Cambridge (a sub-contract funded by the UK Medical Research Council (MRC)). Notable new funded projects include Accelerating Comprehensive HIV/AIDS Service Delivery in the Mid-west and West Nile region (CDC), Accelerating epidemic control in Kampala region of Uganda through scale up of evidence based and high impact interventions towards achievement of UNAIDS 90:90:90 targets (CDC), the Uganda Malaria Action Plan for Districts (MAPD) (USAID through Malaria Consortium), and Defeat TB (USAID through URC). The business development team developed a Funding Opportunities Monitor (FOM) with which it disseminates information on potential funding opportunities in areas of IDI's interest. The FOM is aimed at stimulating active participation in grant and proposal writing activities in order to build greater organization-wide resource generation capacity (IDI does not have dedicated proposal writers).

Sources of funds for IDI from July 2016 to June 2017



Financial results 2016/2017

Income	2017 (US$)	2016 (US$)
Grant income	26,140,222	18,250,788
Self-generated income	2,562,713	1,466,293
Interest income	206,129	396,007
Total Income	**28,909,064**	**20,113,088**
Expenditure		
Salaries and benefits	9,805,817	7,613,789
Program expenses	10,562,290	5,915,847
Transportation	2,677,918	2,147,071
Office Expenses	1,006,737	513,488
Facilities expenses	2,559,791	2,337,488
Administration expenses	699,468	669,310
Foreign exchange loss	334,931	263,934
Total expenditure	**27,646,952**	**19,460,927**
Surplus for the year	1,262,112	652,161
Other comprehensive income for the year	-	-
Total comprehensive income for the year	**1,262,112**	**652,161**
Assets		
Non - current assets		
Property and equipment	3,528,487	3,417,886
Investment property	574,181	575,851
	4,102,668	**3,993,737**
Current assets		
Inventories	25,179	49,788
Receivables and prepayments	6,044,410	4,121,109
Investments in fixed deposits	596,654	1,954,780
Cash and cash equivalents	7,662,487	4,700,099
	14,328,730	**10,825,776**
	18,431,398	**14,819,513**
Reserves and liabilities		
Reserves		
Accumulated surplus	11,832,426	10,570,314
Non - current liabilities		
Deferred income	2,083,097	1,800,386
Retirement benefit obligation	609,910	376,782
	2,693,007	**2,177,168**
Current liabilities		
Trade and other payables	3,905,965	2,072,168
Total reserves and liabilities	**18,431,398**	**14,819,513**

Accounts audited by KPMG

Leadership

Senior Management Team

Richard Brough
Executive Director

Mohammed Larmode
Head, Prevention, Care & Treatment Programme

Isaac Lwanga
Deputy Head, Prevention, Care & Treatment Programme
Director of Clinical Services

Andrew Kambugu
Head, Research Programme

Barbara Castelnouvo
Deputy Head, Research Programme & Head Longitudinal Cohort Unit & Capacity Building Unit

Alex Muganzi
Head, Outreach Services Programme

Joanita Kigozi
Deputy Head, Outreach Services Programme

Umaru Sekabira
Head, Training & Capacity Development Programme

Walter Joseph Arinaitwe
Deputy Head, Training & Capacity Development Programme

Tom Kakaire
Head Strategic Planning & Development Department

Jackie Marlene Kwesiga
Deputy Head, Strategic Planning & Development Department

Susan Lamunu-Shereni
Head, Finance & Administration Department

Milly Laker
Deputy Head, Finance & Administration Department

Richard Orama
Head, Information Services Department

Richard Senono
Deputy Head, Information Services Department

Bosco Kafufu
Laboratory Administrative Director

Board Members

Samuel Luboga Abimerech
IDI Board Chairperson,
Executive Director, Sustainable Leadership Institute
Associate Professor (ret.) Makerere University

Ernest Okello Ogwang
Deputy Vice Chancellor, Academic Affairs
Makerere University

Milly Katana
Director, Senior Support Services

Wilfred Griekspoor
Director Emeritus, McKinsey & Company
Amsterdam, Netherlands

Harriet Mayanja-Kizza
Professor of Medicine, College of Health Sciences,
Makerere University

Sam Zaramba
Senior Consultant, Ear Nose & Throat Surgeon

Moses Joloba
Dean, School of Biomedical Sciences
Makerere University

Charles Ibingira
Principal, College of Health Sciences
Makerere University

Philippa Musoke
Professor of Paediatrics, College of Health Sciences
Makerere University

Alex Opio
Public Health Consultant & Researcher
Medireal

Yuka Munabe
Professor of Medicine, Division of Infectious Diseases
School of Medicine, Johns Hopkins University

Jeremiah Chakaya
Executive Director, Kenya Association for the Prevention of Tuberculosis and Lung Disease

IDI Publications

(July 2016 - June 2017)

HIV/TB

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