

ANNUAL REPORT

2017

AMSTERDAM INSTITUTE
FOR GLOBAL HEALTH
AND DEVELOPMENT



ANNUAL REPORT 2017

AMSTERDAM INSTITUTE
FOR GLOBAL HEALTH
AND DEVELOPMENT

2017

© AIGHD 2017

Permission is granted to make copies for personal use, however the information must not be modified and a reference to AIGHD and this disclaimer must be included. This Annual Report is intended for information purposes only. To the maximum extent permitted by applicable law and regulations, AIGHD disclaims all representations, warranties, and guaranties in connection with this Annual Report.

Design & DTP: Alyshia Higgins & Egotype

Photos: iStock (unless otherwise indicated)

CONTENTS

04.	INTRODUCTION
07.	EXECUTIVE BOARD'S REPORT
11.	RESEARCH REPORT
12.	PROJECT HIGHLIGHTS
23.	EDUCATION REPORT
26.	POLICY AND COMMUNICATION
31.	PUBLICATION HIGHLIGHTS
32.	AIGHD UGANDA
34.	WHERE WE WORK
35.	FINANCIAL REPORT

INTRODUCTION

The Amsterdam Institute for Global Health and Development (AIGHD) is an international research institute that works to develop sustainable solutions to major health problems. By taking a problem-oriented approach, AIGHD transcends the boundaries of traditional academic disciplines and integrates three domains into one institute: Global Health and development research, education, and policy advice.

AIGHD was initiated as a partnership between the Academic Medical Center (AMC), the University of Amsterdam (UvA) and the Vrije Universiteit Amsterdam (VU). Today, it is a dynamic research and education institute that thrives on intense collaboration among experts from multiple disciplines including biomedicine, economics, and social and behavioral sciences.

With its interdisciplinary and translational approach, AIGHD addresses the most critical medical, social, economic and political challenges in Global Health and development that cut across national and political borders.

To realize access to high quality health care for all, AIGHD collaborates closely with implementing partners and organizations from both the public and private sectors around the globe.

VISION

We envision a world in which every person can achieve a life of good health, well being and dignity.

MISSION

We address challenges in global health and development by conducting collaborative interdisciplinary research, generating insights and solutions, and developing the next generation of Global Health and development leaders and experts.

FOCUS

Our organization transcends the boundaries of traditional academic disciplines and integrates three domains into one institute: research, education and policy advice.

AIGHD works by linking expertise, resources and programs from organizations involved in health-related research, education, capacity building and policy-making, bringing a 'delivery perspective' to health research and a 'quality aspect' to health care services.

Together with its global network, AIGHD is pioneering innovative approaches to the delivery, financing and improvement of health care, particularly in resource-limited settings.

PARENT INSTITUTIONS



GOVERNANCE

SUPERVISORY BOARD	
Chair	Tom van der Poll
Member	Hans Brug
Member	Hans Romijn
Member	Willem Verschoor
EXECUTIVE BOARD	
Chair	Frank Cobelens
Member	Chris Elbers
Member	Anita Hardon
Member	Michiel Heidenrijk
Member	Constance Schultsz
OPERATIONAL MANAGEMENT TEAM	
Chair, Executive Board	Frank Cobelens
General Manager	Friso Janssen
Member, Executive Board	Constance Schultsz

SUPERVISORY BOARD

- Overall responsibility for governance
- Define strategic direction
- Appointment and supervision of Executive Board
- Bi-annual meetings

EXECUTIVE BOARD

- Execute strategy, scientific direction and policies
- Manage the organization
- Bi-annual meetings, at minimum

OPERATIONAL MANAGEMENT TEAM

- Day-to-day operations
- Finance and control
- Internal and external reporting
- Monitoring progress of projects and programs
- Weekly meetings



FRANK COBELENS
CHAIR, EXECUTIVE BOARD

Professor of Global Health
Faculty of Medicine
Academic Medical Center —University of Amsterdam



CHRIS ELBERS
MEMBER, EXECUTIVE BOARD

Professor and Desmond Tutu Chair Holder
School of Business and Economics
Vrije Universiteit Amsterdam



ANITA HARDON
MEMBER, EXECUTIVE BOARD

Professor in Anthropology of Health and Social Care
Faculty of Social and Behavioral Sciences
University of Amsterdam



MICHEL HEIDENRIJK
MEMBER, EXECUTIVE BOARD

Executive Director, Joep Lange Institute and
Amsterdam Health & Technology Institute



CONSTANCE SCHULTSZ
MEMBER, EXECUTIVE BOARD

Professor of Global Health
Faculty of Medicine
Academic Medical Center —University of Amsterdam

AIGHD is governed
by its Supervisory
Board, Executive
Board and Operational
Management Team.

EXECUTIVE BOARD'S REPORT 2017

SUCCESSSES AND CONTRIBUTIONS

In 2017, the Amsterdam Institute for Global Health and Development (AIGHD) contributed to research, education and policy advice in global health and development.

AIGHD researchers were involved in a large number of research projects resulting in numerous scientific publications and PhD degrees, as well as knowledge of direct relevance for policy and practice in diverse areas of Global Health and development. Our work contributed to, amongst others, treatment guidelines for HIV, revised policies for HIV drug resistance, best practices for high blood pressure monitoring, insights in the course of the tuberculosis epidemic, understanding of the (economic) impact of social protection interventions for the provisioning of basic health care, and interventions to prevent transmission of hepatitis C among men who have sex with men. Several new projects began, covering a wide array from scale-up of HIV treatment, antimicrobial resistance and zoonotic infections to educational reforms. AIGHD continued to perform its work in various geographic locations including sub-saharan Africa, Southeast Asia, Europe and Amsterdam.

In 2017 AIGHD, together with Virology Education, organized the 11th annual INTEREST Workshop. This four-day meeting in Lilongwe, Malawi, offered a broad program of globally-recognized speakers on the diagnosis, treatment and prevention of HIV and HIV-related co-infections to an audience of primarily African health workers and scientists. INTEREST serves an important role in building research capacity for HIV on the African continent.

AIGHD's other educational achievements included the ongoing Master's course in Global Health Research with VU University's Athena Institute, numerous bachelor and master thesis supervisions, and symposia around Global Health topics. AIGHD staff were involved in the development of Global Health as a core component of the new medical Bachelor's curriculum at the University of Amsterdam, including a session on ethics in humanitarian health crises and a Global Health Elective Track that begins in 2018.

In the area of policy development, AIGHD organized a meeting in July on HIV drug resistance attended by officials from the Dutch Ministries of Health and Foreign Affairs and the World Health Organization. AIGHD researchers engaged in several national and global guideline and expert group meetings, including on HIV, antimicrobial resistance, tuberculosis and laboratory strengthening, as well as in various advisory boards of research projects and networks. Of special mention is the appointment of AIGHD's Dr. Cate Hankins as Chair of the Scientific Advisory Board of the European and Developing Countries Clinical Trials Platform EDCTP. AIGHD staff was also involved in the "Noordwijk meetings" on HIV elimination organized by the Joep Lange Institute.

The basis for these wide-ranging achievements is AIGHD's commitment to working in collaboration with other groups and organizations. At home, we continue to work intensively with various research groups within the Academic Medical Center, the Amsterdam Institute for Social Science Research

and the VU School of Business Administration and Economics, as well as others like The Joep Lange Institute (JLI); PharmAccess International (PAI); The Amsterdam Health Technology Institute (AHTI); VU's Athena Institute; KNCV Tuberculosis Foundation; and Health[e]Foundation. Internationally, we have expanded our global network of collaborating universities and research institutes on all continents. In 2017, special attention was paid to strengthening collaborations with: HIV-NAT/Thai Red Cross and Chulalongkorn University (Bangkok, Thailand); Chongqing Medical University, School of Public Health and Management (Chongqing, China), Duke University Global Health Institute (Durham, NC, USA), ISGlobal (Barcelona, Spain), University of Ruhuna (Galle, Sri Lanka) and the Manhica Center for Health Research (Manhica, Mozambique).

Our work has been supported by funding from a wide variety of sources. In addition to support from the Academic Medical Center and the University of Amsterdam, we received project support from The Netherlands Government, the European Union, philanthropic organizations (including the Bill and Melinda Gates Foundation), product development partnerships, and industry sponsors, among others.

CHALLENGES & EXTERNAL FACTORS

Funding for AIGHD's activities and essential support functions remains a challenge due to the continued narrow thematic focus of Netherlands Government funding (NWO-WOTRO) for Global Health and the thematic nature of many of the health-related calls within the EU's Horizon 2020 Societal Challenges Program. Additionally, funding for interdisciplinary research is not easily obtained because review panels for grant applications are often structured along disciplinary lines. Achieving true interdisciplinarity in research is not without challenges: disciplinary approaches and languages differ, as do their means of disseminating results.

On the other hand, the topic of Global Health continues to receive increased interest and support from AIGHD's parent institutes. Based on its very positive evaluation, the University of Amsterdam will continue the Research Priority Area Global Health, which allows AIGHD to provide part-time support for several biomedical and social science researchers to collaborate on new areas of work and grant applications. As of 2018, the AMC will provide part-time funding for a Global Health education coordinator that will strengthen the AIGHD's educational activities, especially within



the medical curriculum. In addition, AIGHD is receiving more direct support from its parent institutes for grant acquisition and other resource mobilization.

AIGHD initiated several interdisciplinary discussions along thematic lines in 2017, with the one on antimicrobial resistance proving to be the most fruitful. It has resulted in a modeling project where two postdocs will collaborate, as well as prompting the initiation of a Public-Private Partnership on global antimicrobial resistance and responding to opportunities with the Dutch Topsector Life Sciences and Health. We also strengthened and initiated regular methodology sessions in which different disciplinary approaches to, for example, statistical analyses are compared and discussed. AIGHD also worked to improve the funding landscape for Global Health. It contributed to the Clingendael Global Health Initiative and to the policy report, *Why The Netherlands should step up its ambitions on global health*, making the case for broadening the scope of the Dutch Government's funding in this area.

Another external condition that AIGHD needed to respond to in 2017 concerned the changing nature of partnerships with, and expectations of, collaborating institutes in low- and middle-income countries (LMIC). Initiatives such as European and Developing Countries Clinical Trials Platform (EDCTP) have been successful in building local research capacity, resulting in a reduced demand for services such as clinical monitoring and data management that AIGHD

offered through its Uganda and Thailand offices. This prompted AIGHD to close its office in Thailand and, by the end of the year, complete the integration of its Clinical Operations Unit in Uganda into the Clinical Trials Unit of Makerere University College of Health Sciences. Meanwhile, in Amsterdam, AIGHD shifted its focus away from clinical operations and data management services for low and middle-income countries as an income-generating activity. Similarly, improved local research capacity in LMIC institutions implies that collaborations are increasingly based on the added value that AIGHD brings, for example, in terms of scientific expertise or education. This urges us to better define and capitalize on that added value in the coming years.

ORGANIZATIONAL DEVELOPMENTS

The most important organizational development in 2017 was AIGHD's move to its new offices in the Amsterdam Health Technology Center. This brings added benefits like: sharing a floor with our collaborating partners (JLI, PAI and AHTI), being physically located closer to the AMC facilities, offering more meeting space, and operating as a platform for Global Health researchers. Another highlight was the launch of AIGHD's new website: www.aighd.org.

At the end of 2017, AIGHD employees numbered 44 FTE in total. AIGHD also employed staff in its branch offices in Kampala, Uganda and Bangkok, Thailand, but both offices were effectively closed by the end of the year. The integration into AIGHD of the Amsterdam Institute for International Development was formally agreed per 1 January and completed by 18 December. The introduction of formal academic titles for research and education staff, within each respective faculties, along with salary scales and annual work plans was completed.

A system of AIGHD staff affiliations was also introduced. Staff members were formally appointed as AIGHD Academic Staff for making a substantive contribution to AIGHD's cause and activities, and granted an academic affiliation (paid or unpaid) with one of the parent institutes (i.e., University of Amsterdam's Faculty of Medicine/AMC, and Faculty of Social and Behavioral Sciences, and VU University's School of Business Administration and Economics).

These Academic Staff positions are meant to clarify the role of academics within AIGHD, strengthen their contribution to its organizational goals, and provide input on AIGHD's directions and

strategy. A second layer of AIGHD Affiliates who have temporary appointments with less formal links with the organization will be officially introduced in early 2018. The completion of AIGHD's forthcoming Strategic Plan 2019-2024 is anticipated in 2018.

This was also the year that two Joep Lange Chair Holders – Prof. Dan Ariely (Duke University, Durham NC, USA) and Dr. Mark Dybul (Georgetown University, Washington DC, USA) were appointed to join the Joep Lange Chair and Fellowship Program, which is endowed by the Netherlands Ministry of Foreign Affairs and the Joep Lange Institute. Prof. Anna Vassall, a health economist at the London School of Hygiene and Tropical Medicine (UK), will begin her fellowship appointment in early 2018. AIGHD's expertise was further strengthened by the appointment of Dr. Frank van Leth to Associate Professor (AMC; applied methodology in global health).

THE YEAR AHEAD

In 2018, AIGHD will continue working on current projects and start several new ones. The organization will further develop and strengthen its interdisciplinarity by actively engaging more researchers from its parent institutes; developing new interdisciplinary areas of work where we are successfully building critical mass in our research; and boosting activities in order to attract more funds for interdisciplinary research in each of our thematic priority areas. AIGHD will help expand education in Global Health within the AMC's new Bachelor's curriculum, including a four-week elective carried out in Sri Lanka in collaboration with Duke University Global Health Institute. Furthermore, AIGHD will strive to increase its visibility, with, among others, the University of Amsterdam, and capitalize on the opportunity to be active at the 2018 International AIDS Society's conference held in July in Amsterdam. Throughout the coming year, AIGHD will strengthen its engagement with partner institutes domestically and abroad, as we seek to combine research and education in a reciprocal manner. Finally, AIGHD will make efforts to improve the funding landscape for Global Health and development at both the Dutch and European levels.

On behalf of the Executive Board
Prof. Frank Cobelens
Chair, Executive Board, AIGHD

KEY FIGURES 2017

ANNUAL TURNOVER

€7.85 M

NUMBER OF STAFF WORLDWIDE

44

NUMBER OF PhD SUPERVISIONS

51

NUMBER OF SCIENTIFIC PUBLICATIONS

143

RESEARCH REPORT

2017

The first step to finding a solution is understanding the problem

AIGHD has been increasingly successful in shaping and executing interdisciplinary research projects in which we combine biomedical, sociobehavioral and economics perspectives on issues of global relevance within six thematic domains: antimicrobial resistance, disease elimination, urbanization and health, chronic care, health markets, and human development.

The scientific output of AIGHD researchers in 2017 included 143 papers in peer-reviewed journals and 10 PhD degrees, including the first Joint Doctorate degree awarded in the Erasmus Mundus Trans Global Health Program (a collaborative PhD project between AIGHD/Academic Medical Center, the Institute of Tropical Medicine Antwerp, and the ISGlobal/University of Barcelona). At the close of 2017, AIGHD researchers played a supervisory role – as a promoter or co-promoter – in 51 ongoing PhD projects.

AIGHD, through its academic constituents, took part in two research evaluations: the six-yearly external research evaluation of the Academic Medical Center (AMC) and the five-yearly external evaluation of the University of Amsterdam Research Priority Area (RPA, “Zwaartepunt”) Global Health. The AMC Evaluation Report describes the achievements of its Department of Global Health as follows: “The scientific output is very high, in terms of both quality and quantity. Based upon the Societal Impact scores of the PIs, the scientific work of the department is also of high societal value.” The RPA evaluation, while seeing room for improvement, concludes: “This initiative has shown excellent performance over the last five years, with an excellent track record of early and mid-career scholars.”

RESEARCH FOCUS AREAS

- » URBANIZATION & HEALTH
- » ANTIMICROBIAL DRUG RESISTANCE
- » INFECTIOUS DISEASE ELIMINATION
- » CHRONIC CARE & AGING
- » HEALTH MARKETS
- » ECONOMICS OF HUMAN DEVELOPMENT



AIGHD'S RESEARCH GROUP LEADERS

Frank Cobelens, Chris Elbers, Anita Hardon, Michael Boele van Hensbroek, Frank van Leth, Robert Pool, Menno Pradhan, Peter Reiss, Constance Schultsz, and Tobias Rinke de Wit.

PROJECT HIGHLIGHTS

COBRA: COMORBIDITY IN RELATION TO AIDS

The COBRA (Co-morbidity in Relation to AIDS) was an EU FP7-funded project that ran from March 2013 to February 2017 and was implemented by a consortium of scientists from 12 institutions in six European countries.

The Amsterdam portion was conducted as a nested substudy of the AGEHIV Cohort Study. This project assessed whether HIV, in people living with a treated HIV infection, contributes to the development of age-associated non-communicable co-morbidity (AANCC), possibly by promoting an acceleration of the process of aging, and whether this is due solely to HIV, or whether other factors may contribute. The study compared a group of HIV-positive people to a group of HIV-negative people with similar demographic characteristics and lifestyles. All HIV-positive participants were on effective antiretroviral therapy (ART) and had an undetectable viral load. COBRA also studied mice with a humanized immune system that allowed the investigators to separate the effects of HIV from those of ART on markers of co-morbidity and ageing to study the impact of starting ART earlier or later.

The COBRA results show that, although those with HIV demonstrated evidence of being biologically older than their actual age compared to the group without HIV, this difference did not appear to grow in patients receiving effective treatment. These results are reassuring for people living with treated HIV infections, as no evidence was



found that treated HIV is associated with accelerated aging. In other words, the group with treated HIV did not age any faster than those without HIV over the two years studied. Limitations existed concerning: the inclusion of only a small number of women and that only a few non-white people without HIV were recruited for the study. The completion of COBRA was celebrated during a one-day symposium held in January 2017.

The results from COBRA were also recently highlighted as a success story by the European Commission (<http://fp7-cobra.eu/>).

FEE WAIVER VERSUS SOCIAL HEALTH INSURANCE SCHEME (COMPARE 2 CARE): COMPARING THE IMPACT AND COST EFFECTIVENESS OF TWO SOCIAL PROTECTION INTERVENTIONS IN KENYA

This project was part of a broader research agenda on inclusive development and social protection implemented by NWO-WOTRO and the INCLUDE platform. The team, led by Prof. Chris Elbers, investigated the impact and cost-effectiveness of two social protection interventions for the provisioning of basic health care in Kenya, namely: the state program on free maternal and primary care and the TCHP health insurance program implemented by PharmAccess Foundation. The study analyzed impact in terms of reaching the poor and specific sub-groups, quality of care, health service utilization, and out-of-pocket expenditures. The study also focused on the associations between social protection interventions and inclusive economic growth. The research was carried out together with the African Population and Health Research Center (APHRC), Health Policy Plus in Nairobi, and PharmAccess Foundation in Amsterdam.

The research indicates that there have been absolute improvements in many aspects of health in Kenya, like the use of antenatal care and skilled delivery, in the last decade. However, health inequalities have increased, given that wealthier people, residents of urban areas, and more highly educated mothers tend to benefit more. Targeted programs are essential to meet the needs of disadvantaged groups. The outputs of the research include a number of policy briefs and several academic papers, which are currently under submission and review. All findings were discussed with Kenyan stakeholders such as the Ministry of Health in Nairobi between June and July 2017.



Photo Credit: MMK

EVALUATION ORIO SOUTH AFRICA

This project evaluated the impact of a water and sanitation program in eThekweni municipality, part of the Durban metropolis in South Africa. This project involved the conversion of shipping containers into sanitary facilities (e.g., showers, toilets and wash basins) in informal settlements throughout the municipality. This program is partially funded through the ORIO fund, which is implemented by the Netherlands Enterprise Agency (RVO). Two partners participated in this evaluation: PwC The Netherlands and Progressus Research and Development in Johannesburg.

The evaluation found that the sanitary facilities were popular and generally satisfactory: more than half of the beneficiaries used them at least once a day. However, cleanliness and defects were a challenge, especially in the older facilities. The quantitative analysis failed to connect the facilities to better health outcomes, but case studies suggest they did make a difference to the health, hygiene and cleanliness of the surrounding area. This report helped RVO to account for the effects of its investment in these water and sanitation facilities to the Ministry of Foreign Affairs and the Dutch general public.



OMRON PILOT EVALUATION

OMRON Healthcare Europe approached AIGHD to collaborate on developing, implementing and evaluating an innovative pharmacy-based hypertension care delivery model for sub-Saharan Africa. In this jointly-developed program, patients with hypertension used community pharmacies, instead of normal health facilities, as their main point of care. Pharmacies were used for taking blood pressure measurements, offering lifestyle advice as well as acting as drug dispensaries. The monitoring of patients and drug prescriptions was conducted remotely by a doctor via a digital data transfer tool, an e-monitoring application. The care model was piloted in Lagos, Nigeria, for six months. We assessed the feasibility of the care model's pilot by analyzing patient retention, changes in blood pressure, and

the quality and satisfaction of participants.

In total, 336 adults with uncomplicated hypertension participated in the pilot. While patients self-reported more visits than were recorded by the e-monitoring data, pharmacists mentioned reasons for this underreporting in the app, including the use of paper records, understaffing, the app not being user-friendly, and patients' unwillingness to pay for the pilot.

During the pilot, mean systolic blood pressure decreased 9.9 mmHg, and blood pressure control doubled. However, this was not associated with retention in the e-monitoring data. Patients reported satisfaction with the pilot because of accessibility, attention, adherence and the provisioning of information. In addition, pharmacists and cardiologists valued the pilot because task-shifting reduces the burden on public healthcare facilities, involvement of cardiologists safeguards the quality of care, and there is good monitoring of patient's adherence.

A wider implementation of the care model should consider the usability of the e-monitoring app, pharmacy characteristics and responsibilities, increased visibility of the cardiologists for patients, and the business model.

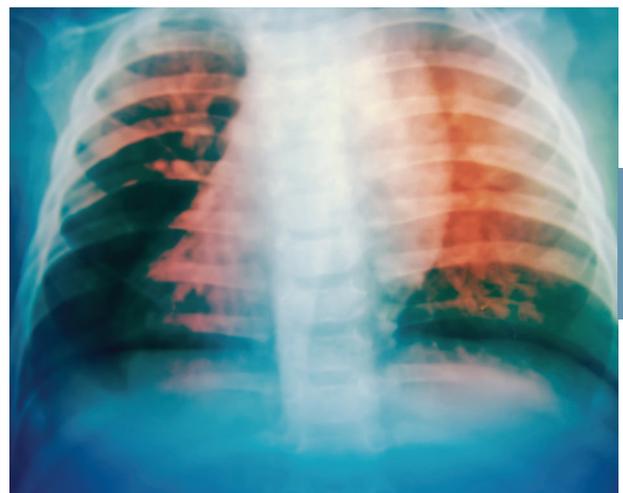
TECOARTE: EPIDEMIOLOGY AND CONTROL OF TUBERCULOSIS IN THE ANTIRETROVIRAL THERAPY ERA: TOWARDS A MATHEMATICAL MODEL FOR CAPE TOWN, SOUTH AFRICA

Despite the increasing implementation of comprehensive control strategies, the tuberculosis (TB) epidemic in sub-Saharan Africa has continued to expand in the last 20 years. This project, completed in March 2017, adds to the body of knowledge that seeks to understand the reasons underlying such failures to control TB and to develop innovative public health approaches in response to TB. Postdoctoral researcher Sabine Hermans spent two years at the Desmond Tutu HIV Centre at the University of Cape Town in South Africa, and one year at AIGHD.

Her work found that the trajectory of TB incidence in Cape Town over the last 100 years was very different when compared to that of London and New York. The introduction of chemotherapy did not reduce the TB epidemic in Cape Town, and even before the advent of the HIV epidemic, TB rates were already at the same level as they were at the beginning of the century. Following the arrival of the HIV epidemic, the lifetime incidence of TB among the population has risen from 25% before the HIV epidemic to even higher.

The most important finding from TECoARTE was that the burden of recurrent TB in Cape Town is very high, with over 30% of TB patients developing one or more additional episodes over a period of 12 years. The risk of another episode of TB increased greatly with every subsequent episode.

Analyses of the data from the last 13 years show a reduction in TB rates over the last five years, which may be due to the roll-out of antiretroviral therapies. However, it is important to note that the ecological study design did not allow for attribution of causality. An alternative or



complementary explanation may involve a decline in empirical treatment rates, which we identified in an evaluation of the impact of the roll-out of a new rapid molecular diagnostic test.

An age-stratified mathematical model of TB in Cape Town confirmed that the TB burden is determined by the underlying age structure, but that a protective effect of latent infection by previous TB strains, as well as rates of progression to active TB disease after a prior episode of TB, also play an important role.



RISE INDONESIA: EVALUATING HOW TEACHER REFORMS IN DECENTRALISED INDONESIA CAN PROMOTE LEARNING GAINS

This project focuses on two issues. First, how can policy reform in the areas of teacher distribution, recruitment, training, and rewards improve student learning? And second, what reforms do innovative districts implement, how effective are these reforms in improving learning outcomes, and do they spread to other districts or the national level? The researchers involved examine how national and district governments in Indonesia support and learn from each other in the implementation of policy towards teachers and national exams in order to improve students' education levels. Indonesia offers an ideal laboratory to explore these issues because local districts have significant autonomy in terms of teacher management, distribution, and training. The research project will also analyse nationwide reforms that aim to raise teacher quality in the hope of enhancing students' learning. The project was launched in Jakarta on September 26, 2017 with officials from the Indonesian Ministry of Education in attendance. Next to AIGHD, the project consortium consists of the SMERU Institute based in Jakarta, the Mathematica Policy Research of Washington D.C., Prof. Menno Pradhan of AIGHD as Lead Researcher, and further participation by Prof. Hessel Oosterbeek from UvA's School of Economics. The project is part of a broader program for Research on Improving Systems of Education (RISE), funded by the United Kingdom's Department for International Development (DFID) and Australia's Department of Foreign Affairs and Trade (DFAT). In addition to RISE Indonesia, AIGHD is involved in further RISE research in Tanzania through Dr. Youdi Schipper's participation in the project Big Results Now! Research on education systems reform in Tanzania.

HECTOR: THE IMPACT OF HOST RESTRICTION OF ESCHERICHIA COLI ON TRANSMISSION DYNAMICS AND SPREAD OF ANTI-MICROBIAL RESISTANCE

The prevalence of anti-microbial resistance (AMR) is increasing rapidly around the world, including bacteria colonizing healthy human and animal populations. The recent reports of plasmid mediated colistin resistance, potentially associated with colistin usage in agriculture, further raise fears of infections that are untreatable due to AMR. The commensal flora of humans and animals is a reservoir of AMR-encoding genes, and *Escherichia coli* in particular can carry multiple AMR determinants. AMR transmission within *E. coli* appears dominated by certain lineages. To what extent these are restricted to certain host species is unknown. Such host restriction may be an important determinant of the likelihood of transmission of resistant *E. coli* between different reservoirs (e.g., between animal and human hosts). Identifying determinants that allow disentanglement of the different modes of resistance transmission is crucial for a more targeted design of interventions to prevent and reduce the transmission of resistance.

This research aims to identify determinants of host restriction of *E. coli* and their potential association with AMR transmission and prevalence. We apply a One Health approach using mixed methods, including whole genome sequencing of a large collection of *E. coli* isolates from human, animal and environmental sources across Europe and in Vietnam. Other methods include the use of experimental models to study the role of host restriction determinants in transmission and bacterial fitness, and mathematical modelling. The research will result in a risk-assessment that estimates the contribution of different transmission routes and predicts the effect of interventions on a single route on the overall prevalence in different compartments. The consortium, that includes various European universities (Friedrich-Loeffler-Institut, University of Surrey, Universidad Complutense de Madrid, University of Oxford, Freie Universität Berlin and University of Utrecht), is uniquely placed to perform this research as it consists of experts in the field of AMR, who work in human and animal health domains, and represent highly complementary disciplines. HECTOR is coordinated by AIGHD Prof. Constance Schultsz.

PIGSs - PROGRAM FOR INNOVATIVE GLOBAL PREVENTION OF STREPTOCOCCUS SUIIS

Streptococcus suis is an endemic porcine disease causing significant economic losses to producers of pork meat. In some countries *S. suis* is the primary cause of mortality and morbidity in young pigs, and the most frequent reason to prescribe antibiotics of the aminopenicillin group as a preventative measure. *S. suis* is also a zoonotic pathogen for humans. Human infection can be severe, causing meningitis, septicaemia and endocarditis, and infections reported worldwide have increased significantly in recent years. Within *S. suis* many different subtypes exist, causing problems in the development of control strategies that target all subtypes. Asymptomatic carriage in adult pigs is common, and combined with a lack of knowledge on the host-pathogen-environment interactions, is the main reason for failure to control the endemic nature of this pathogen.

The project aims to understand host-pathogen-environment interactions of *S. suis* infections through the genome sequencing of *S. suis* isolates from representative areas of major pork producing countries, and by performing genome-wide association (GWA) studies with invasive disease and asymptomatic carriage. New diagnostic methods will be developed for the global monitoring of infection risk and tested on case farms. Epidemiology studies will determine risk factors for invasive *S. suis* disease, including the role of co-infections, and for the first time, will properly assess the dynamics of the disease on a representative farm. The project outputs will strengthen the evidence base for prevention and control strategies through the testing of novel conserved vaccine antigens in pigs and prevention strategies based on manipulation of the microbiota. The consortium includes, in addition to AIGHD and AMC, Wageningen University and Wageningen Research Foundation, University of Cambridge, Ceva Santé Animale SA, L'Institut de Recerca i Tecnologia Agroalimentàries, Danmarks Tekniske Universitet, Tierärztliche Hochschule Hannover and Chr. Hansen A/S. In addition, to research in pigs, the zoonotic potential, and the epidemiology of zoonotic *S. suis* (italics) infections in Europe will be studied. This work will be carried out by AIGHD-AMC.

SHINYANGA

In 2017, an operational research program about the implementation of an HIV Test & Treat approach in Shinyanga and Simiyu Regions in Tanzania commenced. This project was initiated by the late Prof. Joep Lange and is carried out through the Diocese of Shinyanga, with

an Italian NGO (CUAMM) acting as the implementing partner. AIGHD is responsible for the research component, which is being led by Dr. Anton Pozniak and Dr. Bernard Desderius.

AIGHD's research covers clinical and biomedical elements, such as HIV drug resistance testing along with socio-anthropological research on the challenges of identifying new HIV patients in a situation of substantial ART coverage. AIGHD also looks into challenges related to retention in care and task shifting. Finally, economic research is planned in relation to costing for implementation. The economic research is strengthened by an Erasmus Mundus bursary, while an additional TB outreach activity is funded through complementary TB-REACH subsidies. Further research expansion is expected, based on collaborations with the national AIDS and TB control programs in Tanzania.

IMPROVING TB CASE DETECTION IN RURAL POPULATIONS BY LINKAGE TO HIV TEST AND TREAT PROGRAMS

Tuberculosis (TB) is one of the leading causes of death globally, with only approximately 63% of people with active TB currently being diagnosed and treated. Missed or delayed diagnosis and treatment is responsible for significant morbidity and mortality. Since 2015, the World Health Organization (WHO) recommends a Universal Test & Treat (UTT) approach for HIV/AIDS, so all individuals testing positive for HIV start antiretroviral treatment (ART) immediately. Tanzania adopted this in 2016. As the barriers to seeking TB diagnosis and care coincide with those for testing for and enrolling into HIV care, the aim of this project is to investigate the feasibility and effectiveness of incorporating TB screening into the UTT model of care in rural Tanzania. The project will integrate TB screening into the community-based HIV testing as part of general roll-out of UTT in rural Shinyanga, Tanzania. It will also pilot a mHealth methodology to improve linkage to care and to facilitate the testing of household members of those who are found to have TB. Partners of AIGHD in this project include the National Institute for Medical Research in Tanzania, Doctors with Africa CUAMM, Bugisi Health Centre, and the National TB and Leprosy Programme of Tanzania. Project screening activities are set to commence in April 2018. The objectives of this project are fourfold: to investigate the feasibility of this approach and its impact on TB case notification; to investigate the effectiveness of reporting TB screening results and household contact screening via an mHealth approach; to determine the most effective and cost-effective TB screening algorithm in the context of a HIV UTT program; and to determine the association between hemoglobin levels and TB disease and if this association can be used to simplify the TB screening algorithm.



AMSTERDAM MSM HEPATITIS C FREE (MC FREE) INITIATIVE

In the Netherlands, unlike many other countries, HIV-positive men who have sex with men (MSM) account for the majority of new Hepatitis C virus (HCV) infections. Due to increased efficacy and tolerability of new antiviral agents for the treatment of HCV, a cure is possible for the majority of patients. The November 2015 eligibility for interferon-free HCV treatment in The Netherlands was expanded for all chronic HCV patients regardless of the extent of liver fibrosis. The main objective of the MC Free initiative is to reduce the incidence of HCV infections among MSM in Amsterdam. The MC Free team combines expertise and knowledge from virologists, clinicians, public health specialists, and a non-governmental organization specialized in sexual health to develop an innovative, integrated strategy aimed at eliminating HCV among MSM in Amsterdam.

Online and offline interventions were developed to increase knowledge and awareness of HCV infection, to increase regular HCV testing and earlier diagnosis, and to stimulate risk reduction behavior. By the end of 2017, project outputs included a home-based HCV viral load testing intervention, and a toolbox with products to stimulate risk reduction strategies for MSM at risk for HCV (which are available on the website for our target population: www.nomorec.nl). We will also develop an e-learning module and provide face-to-face training for health professionals in primary, secondary and public health care about HCV sex- and drug-related risks, risk-reduction measures, strategies to prevent HCV re-infections, testing options, partner notification, and the benefits of quick linkage to care.



AGEHIV COHORT STUDY: COMORBIDITY AND AGEING WITH HIV

The AGEHIV Cohort Study compares the prevalence and incidence of a broad range of non-communicable comorbidities and their risk factors between HIV-infected and uninfected individuals aged 45 and older. Its primary aims are to determine the extent to which HIV may increase the risk of developing such co-morbidities, and to study potential underlying mechanisms, especially those that may affect aging as a result of infection and antiviral treatment. The study began recruitment in the Netherlands in November 2010, and within two years 598 HIV-infected and 550 uninfected individuals had enrolled and completed their baseline assessment. As this study continues, participants are followed up with every two years. Globally, this study is considered to be one of the most robust and extensive studies of co-morbidity and aging with HIV.

Findings continue to be presented at major international conferences and published in peer-reviewed publications. Judith Schouten and Katherine Kooij were the first two PhD students who successfully defended their academic thesis in January 2017 based on this study's findings. A website dedicated to the study was launched in 2017 and can be viewed at: <https://agehiv.nl/en/>.



H-TEAM: HIV TRANSMISSION ELIMINATION AMSTERDAM INITIATIVE

The H-TEAM initiative is a unique collaboration between all stakeholders involved in the prevention of HIV transmission and care of people living with HIV in Amsterdam, including key affected communities (Public Health Service of Amsterdam, HIV Patient Association, General Practitioners Amsterdam, Dutch Association of HIV Clinicians, National Institute for Public Health and the Environment, Soa Aids Netherlands, Stichting HIV Monitoring, the Amsterdam hospitals as well as Erasmus Medical Center and Maasstad Hospital Rotterdam, Leiden University Medical Center and Public Health Service of Rotterdam-Rijnmond).

The main objectives are to decrease the number of new HIV infections in people at risk of becoming HIV-infected, and to promote the health of HIV-infected individuals and reduce their risk of transmitting HIV to others. The H-TEAM initiative has developed and implements innovative strategies to expand testing and immediate treatment for HIV, as well as to prevent further transmission of the virus. For example, H-TEAM implemented strategies to enhance the awareness of acute and chronic HIV infection and the benefits of regular testing, early diagnosis and treatment among the key populations and their health care providers. They combined this with rapid testing procedures and the fast linkage to care and provisioning of immediate HIV treatment. H-TEAM also implemented a demonstration project that evaluates the uptake, acceptability, and usability of pre-exposure prophylaxis (PrEP) for MSM and transgender people with increased risk of acquiring HIV.



ROTABIOME: THE INFLUENCES OF THE VIRAL, FUNGAL AND BACTERIAL MICROBIOME ON ROTAVIRUS VACCINE IMMUNE RESPONSES IN GHANA

Rotavirus is the leading cause of diarrhea-related death in children worldwide, with 95% of rotavirus deaths occurring in low-income countries in Africa and Asia. Rotavirus vaccines (RVV) have the potential to dramatically reduce the morbidity and mortality caused by rotavirus infection. However, rotavirus vaccines demonstrate significantly lower efficacy in low-income countries. Understanding the pathophysiology behind this diminished efficacy is critical, as even small improvements in efficacy could increase the number of children's lives saved by the vaccine by hundreds of thousands over the next 15 years.

One of several explanations for these differences in vaccine efficacy is that the infant intestinal microbiota may be modulating an infant's immune response to the enteric RVV. We hypothesized that the composition of the intestinal microbiota is influencing RVV response, that RV vaccine responders have different intestinal microbes as compared to non-responders, and that these dissimilarities contribute to the decreased efficacy of RVV found in Africa and Asia. Therefore, we conducted a case control study comparing the bacterial, viral, and fungal fecal microbiome composition between infants with and without a RVV response. Preliminary results indicate that increased bacteria from the Proteobacteria phylum at the first dose of vaccination, in combination with decreased bacteria from the Bacteroidetes phylum, correlate with increased vaccine response. In addition, several visual trends correlate viral composition as well as fungal abundance with RVV immunity. These analyses are ongoing.

AIGHD PROJECTS 2017

PROJECT TITLE	PROJECT LEADER
Co-morbidity in relation to AIDS	Prof. P. Reiss
Epidemiology and control of tuberculosis in the antiretroviral therapy era: towards a mathematical model for Cape Town, South Africa	Dr. S. Hermans
Analysis on the concepts, relationships between, and causes of poverty, income inequality and economic growth	Prof. P.F. Lanjouw
Expanded use of ART for treatment and prevention in female sex workers in South Africa (TAPS project)	Dr. G. Gomez Guillen
Evaluation of the ORIO project ORIO09/SA/01 Sustainable Water and Sanitation Development Programme for Indigent Communities in eThekweni Municipality, South Africa	Prof. C.T.M. Elbers
Comparing the impact and cost effectiveness of two social protection interventions in Kenya: fee waiver versus social health insurance scheme	Prof. C.T.M. Elbers
OMRON Pilot Evaluation	Dr. A.H. van 't Hoog
Synthesis Evaluation of SRHR Subsidy Policy Frameworks 2011-2015	Prof. M. Temmerman
Big Results Now! Research on Education System Reform in Tanzania	Dr. Y. Schipper
Novel strategies and tools for antimicrobial resistance surveillance	Prof. M. de Jong
International Doctorate in Transdisciplinary Global Health Solutions	Prof. dr. F.G.J. Cobelens
Thematic coordination infectious disease and health; "Translating health research into health policy in Indonesia: barriers and solutions"	Prof. dr. M de Jong
EU-India research and innovation partnership on vaccine development for hookworm and other neglected tropical diseases	Dr. R. van Leeuwen
The gut microbiome as a determinant of the diminished rotavirus and enteric vaccine immunogenicity seen in the developing world	V.C. Harris
Productive Employment in the Segmented Markets of Fresh Produce	Prof. dr. M.P. Pradhan
New challenge for HIV in Africa; exacerbated immune activation during antiretroviral treatment; biomarkers and health impact	Dr. R. Hamers
Rota-biome: the influence of the viral, fungal and bacterial microbiome on rotavirus vaccine immune responses. A retrospective study in Ghana.	V.C. Harris
NIH Fogarty Grant 2017	Dr. C. Hankins
Impact evaluation of Early Childhood Interventions	Prof. dr. M.P. Pradhan
11th INTEREST Workshop, Lilongwe, Malawi, 16-19 May 2017	Dr. C. Hankins
ITN Acquisition Grant	Dr. F. van Leth
Evaluation of the ORIO project 09/VN/04 Realisation of Two Water Supply Plants for Rural Areas in Ba Ria Vung Tau Province	Prof. dr. C.T.M. Elbers
Ethical Review Dilemma	Dr. A.H. van 't Hoog
Analyzing treatment effects in observational studies: comparison of methodologies	Dr. F. van Leth
Point-of-care diagnostics to Guide appropriate antimicrobial therapy of urinary tract infections in nursing homes	Dr. F. van Leth

PROJECT TITLE	PROJECT LEADER
SPARKS	Dr. C. Hankins
Principal Investigator - Quantitative Research KIAT Guru	Prof. dr. M.P. Pradhan
Hepatitis C Bond: demonstrating feasibility of Hepatitis C treatment through a social impact bond structure in Cameroon	Dr. P. Ondoa
Improving TB case detection in a rural population by linkage to a HIV Test and Treat Programme	Dr. S. Hermans
Inequality in the Giants - Inequality in India: Dimensions and Trends	Prof. dr. P.F. Lanjouw
HIV Transmission Elimination Amsterdam (H-TEAM) study	Prof. P. Reiss
HealthTech Park	Mr. M. Heidenrijk
Developing and Testing a novel, low-cost, effective HOOKworm VACCine to Control Human Hookworm Infection in endemic countries	Dr. R. van Leeuwen
Women empowerment, social norms, and violence against women and girls	Dr. W. Janssens
South Sudan Nodding Syndrome Study programme: A study into the epidemiology, aetiology and outcome of nodding syndrome in South Sudan	Prof. dr. M. Boele van Hensbroek
ASPASIA premie - Dr. Constance Schultsz	Prof. dr. C. Schultsz
Amsterdam MSM Hepatitis C Free	Dr. M. van der Valk
Comorbidity and aging with HIV (AgeHIV Cohort Study)	Prof. dr. P. Reiss
1H4F – Integrated approach to prevention and control of Streptococcus suis infections in pig farming	Prof. dr. C. Schultsz
Transnational Research Projects on the Transmission Dynamics of Antibacterial Resistance	Prof. dr. C. Schultsz
Impact Evaluation of the MASSIF Investment in Business Partners International (BPI)	Prof. dr. C.T.M. Elbers
Trials of Excellence in Southern Africa II	Prof. dr. F.G.J. Cobelens
Eastern Africa Consortium for Clinical Research 2	Prof. dr. F.G.J. Cobelens
Sociology of Health and Aging	Prof. dr. C. Schultsz
Evaluation of the ORIO project ORIO09/GH/05 Ghana TB Case Detection	Dr. F. van Leth
Flexibele OïO - The impact of Host restriction of Escherichia coli on Transmission dynamics and spread of antimicrobial Resistance	Prof. dr. C. Schultsz
Program for Innovative Global Prevention of Streptococcus suis	Prof. dr. C. Schultsz
Tanzania HIV Test & Treat in Shinyanga and Simiyu Regions	Prof. dr. T.F. Rinke de Wit
Evaluating How Teacher Reforms in Decentralised Indonesia can Promote Learning Gains	Prof. dr. M.P. Pradhan
Impact Evaluation of the Facility for Sustainable Entrepreneurship and Food Security	Dr. Y. Schipper



We see our students as potential future colleagues. We strive to provide a stimulating and supportive learning environment that ensures graduates are fully equipped with the breadth of knowledge, skills and insights needed to pursue a successful career in Global Health.



Guus ten Asbroek

Bachelor, Master & Postgraduate Education Coordinator, AIGHD

AIGHD'S LECTURERS AND CURRICULUM DEVELOPERS

Dr. Guus ten Asbroek, Daniella Brals, Prof. Frank Cobelens, Dr. Marleen Hendriks, Prof. Michael Boele van Hensbroek, Dr. Anja van 't Hoog, Dr. Frank van Leth and Prof. Constance Schultz.



In 2017:

PhD supervisions	51
PhD defenses	10
Bachelor thesis supervisions	11
Internships	9

Note: Statistics for PhDs based on calendar year. Statistics for Bachelor/Master based on 2016/2017 academic year.

(L-R): Prof Menno de Jong (AMC), Prof Piet Kager (AMC-UvA, Chair), Prof Constance Schultz (AIGHD and Trung's PhD supervisor), Trung Vinh Nguyen, Prof Heiman Wertheim (Radboud UMC, Nijmegen), Dr. Ngo Thi Hoa (Oxford University Clinical Research Unit, Vietnam, co-promotor) and Trung's mother at his successful PhD defense ceremony, titled "Antimicrobial Drug Resistance at the Human-Animal Interface in Vietnam".

EDUCATION REPORT 2017

Developing and inspiring the next generation of Global Health leaders

At the undergraduate level, AIGHD coordinates the Global Health elective course for second year Bachelor of Medicine students at the Academic Medical Center (AMC), the university hospital and Faculty of Medicine at the University of Amsterdam (UvA). In the 2017-2018 academic year, AIGHD offers two new elective tracks in Global Health for the renewed medical curriculum 'Epicurus'. This is being carried out in collaboration with multiple university departments in the AMC, Duke University's Global Health Institute and the medical faculty of the University of Ruhuna, in order to increase competence in Global Health and promote interdisciplinary learning. In 2017, AIGHD supported eleven bachelor thesis projects. In addition, AIGHD contributed to the core general knowledge and attitudes track of the curriculum.

In collaboration with the Vrije Universiteit Amsterdam (VU), AIGHD offers the two-year Research Master's in Global Health at the VU. Since 2012, AIGHD has coordinated curriculum elements of this program and continues to develop and innovate its contributions as an active participant of the coordinating team. Scientific internships are hosted by AIGHD for Master's degree students, allowing students to gain 'hands-on', real-world skills in Global Health research. In 2017, AIGHD hosted nine such internships, many of which included international fieldwork and experiential collaboration with local

communities, researchers, and institutions.

AIGHD researchers supervised 51 PhD students, of which 10 completed their work with a public defense and received a diploma. PhD research work is supervised (or co-supervised) by one of AIGHD's research group leaders.

The research groups leaders provide supervision and mentorship throughout the duration of the PhD, including overseeing the quality and completeness of the research. PhD students are deeply embedded within active research teams at AIGHD in the Netherlands and abroad, in fields such as infectious diseases, chronic diseases, and health systems, collaboratively working with internal and external researchers and institutions.

Alongside its involvement in Global Health education at the VU and with AMC/UvA, AIGHD also contributes to Global Health courses at the Amsterdam University of Applied Sciences (HvA) and various professional organizations and NGOs locally and globally. In collaboration with partner institutions, AIGHD also conducted professional training in Nigeria and Uganda in Quantitative Research Methods and Good Clinical Practice.

STUDENT TESTIMONIALS

POSTDOCTORAL FELLOW

TRUNG VINH NGUYEN

“When I finished my Master’s program, I was particularly interested in a challenging and integrated project on antimicrobial resistance (AMR). I chose the Amsterdam Institute for Global Health and Development (AIGHD) because it is a dynamic research institute with clear scientific research priorities, including antimicrobial drug resistance.

“My thesis, which was supervised by Prof. Constance Schultsz, studied the potential zoonotic transmission of AMR bacteria and AMR determinants between humans and animals in Vietnam.

“Constance and the other supervisors provided me with endless scientific support throughout my PhD and their invaluable insights have motivated me at various stages of my research. I learned so many things within a very short duration of time at AIGHD. I feel fortunate to have the support not only from my supervisors but also from other scientists within the organization.

“The training that I received during my PhD in the Netherlands, and at AIGHD in particular, is a solid foundation for my research career. The connections that I have built with other scientists at AIGHD will be very important for my future research.”



Trung at his PhD defense ceremony in 2017.

MASTER'S THESIS WORK AT AIGHD - VISITING MASTER'S STUDENTS FROM DUKE KUNSHAN UNIVERSITY

JINGYU TONG (L) AND MENGSI JIANG (R)

"As global health students, both of us are particularly interested in non-communicable diseases (NCDs) and implementation science. The process of translating research findings into policies, actions, as well as into individual behavioral change, is fascinating. This interest has brought us, last summer, to an internship with AIGHD.

"With the support from both AIGHD and Duke Kunshan University (DKU), we conducted two projects aimed at exploring perceptions of Dutch health professionals about ethnic disparities in hypertension control, as well as factors associated with the implementation of guideline recommendations of cardiovascular risk management of hypertension. We were actively involved in the project planning, organization and implementation, which was a valuable learning experience.

"Our colleagues never hesitated to offer us help when needed, for example, with analyzing quantitative data or addressing visa and other logistics issues. Most importantly, the research team at AIGHD made us feel at home, and quickly guided us with rich insights necessary for carrying out our research. Thanks to the unwavering support from our AIGHD supervisor Dr. Lizzy Brewster, we tackled many unexpected obstacles during our research. As a result, we exceeded our previous goal by completing 13 interviews and 77 questionnaires.



"Our internship at AIGHD was a rewarding experience. Not only did our internship fuel our research passion, it also helped us build strong connections with senior researchers at AIGHD. As we are currently working on our theses, which reminds us of the good memories we had at AIGHD and the harmonious yet passionate working atmosphere they provided. We believe that whatever our future may entail, we will benefit from this unforgettable experience."

POLICY AND COMMUNICATION 2017

Expert advice and knowledge sharing that makes a difference

In 2017, AIGHD researchers made several contributions to public health policy, both globally and domestically. This included contributions to policy documents, as well as developing guidelines about disease control, treatment, and diagnostics.

One important policy area AIGHD contributed to in 2017 was resistance to antiretroviral drugs (ART), used in the treatment of HIV infection. Through its long-term research on HIV drug resistance in Africa, AIGHD has built a close working relationship with the World Health Organisation (WHO) on this topic. In 2017, AIGHD held regular exchanges of information and wrote joint articles with the WHO HIVResNet team. AIGHD researcher Tobias Rinke de Wit was invited to open the launch of the new WHO guidelines during the International AIDS Society (IAS) Conference in Paris, which included reports on worldwide HIV drug resistance.

PhD student Seth Inzaule was offered a position at the WHO HIVResNet team, which he will begin in early 2018. In July, AIGHD hosted a meeting of the WHO HIVResNet team with Dutch stakeholders, including the Ministry of Foreign Affairs, the Ministry of Health, Welfare and Sports, and the National Institute of Public Health and The Environment. Here other types of antimicrobial resistance (such as in common bacterial pathogens and tuberculosis) were highlighted as well.

A related policy area concerns control of antimicrobial resistance (AMR) in sub-Saharan Africa. AIGHD researcher

Constance Schultsz advised the newly established Africa Centers for Disease Control (Africa CDC) on the development of their AMR Framework. The framework is designed to help prioritize action, and advise countries of the African Union on the development and implementation of their AMR action plan.

In the field of tuberculosis (TB), AIGHD researcher Frank Cobelens contributed to a WHO framework for the evaluation of improved tests for latent TB infection. AIGHD's Peter Reiss made important contributions in the field of global HIV elimination through his involvement in several high-level policy panels, including the European AIDS Clinical Society panel for HIV treatment and co-morbidities, the UNAIDS Strategic and Technical Advisory Committee



Professor dr. Frank Cobelens presents at the Tuberculosis Alliance Stakeholder Meeting Guadalajara, October 2017

Photo credit: Victor Chavez

to the Executive Director, and the UNAIDS Scientific Expert Panel advising the Executive Director.

Domestically, Frank Cobelens co-initiated the Clingendael Global Health Initiative. This initiative brings together Dutch stakeholders in Global Health, including academia, ministries, industry and NGOs, to define the needs and role for The Netherlands in Global Health, and advocate for a broader strategic approach to Global Health by the Dutch Government. This culminated in the publication of the policy report *Why the Netherlands should step up its ambitions on Global Health*, issued by the Netherlands Institute for International Relations Clingendael.

Finally, various staff members contributed to research policy on Global Health. AIGHD's Cate Hankins started her term as Chair of the Scientific Advisory Board of the European-Developing Countries Clinical Trials Platform (EDCTP), a major EU funder for research on new drugs, vaccines and diagnostics for poverty-related diseases and neglected tropical diseases in sub-Saharan Africa. Frank Cobelens was appointed a member of the International Advisory Board of the Research Networks for Health Innovations in Sub-Saharan Africa, a flagship initiative by the German Government to fund and accelerate Global Health research.



Tobias Rinke de Wit opening the launch of the new WHO guidelines at the International AIDS Society Conference in Paris.



Seth Inzaule, PhD student, will begin his position with WHO HIV ResNet in 2018.

Photo credit: Snipe Shot Photography



INTEREST

16-19 MAY 2017
LILONGWE, MALAWI

11th INTERNATIONAL WORKSHOP ON HIV TREATMENT,
PATHOGENESIS, AND PREVENTION RESEARCH
IN RESOURCE-LIMITED SETTINGS

The 11th annual INTEREST Conference was held in Lilongwe, Malawi on 16-19 May 2017. It attracted 506 active delegates, including 178 African delegates. The annual conference is co-organized by AIGHD and Virology Education.

As in the previous three years, the INTEREST Workshop was dedicated to the memory of Professor Joep Lange and Jacqueline van Tongeren, who were pivotal in establishing the INTEREST meetings. They died tragically when their plane (flight MH17) was shot down over the Ukraine on July 17, 2014. This year's conference was opened by the Minister of Health for Malawi, the Honourable Dr. Peter Kumpalume, who welcomed all the delegates and called for everyone working in the field of HIV to focus on the most efficient use of human and financial resources in order to end the HIV epidemic. He said that his ambition was that people living with HIV should die with HIV and not from HIV.

Data were presented from several exciting projects that are taking place in Malawi, given its reputation as a center of excellence in HIV research. Lively conversations took place during scientific sessions, which all took place in plenary, and during the cultural and social events. A spirited plenary debate addressed whether non-communicable diseases in people living with HIV are the next priority for HIV programs in sub-Saharan Africa. The 38 highest-scoring scientific abstracts were highlighted in oral, mini-oral and poster presentations.

Duke University's Guido Ferrari and AIGHD's Cate Hankins, who is also INTEREST's Scientific Chair, successfully competed for an USA National Institutes of Health/Fogarty International Center grant that provided travel support for young scientists chosen for oral and mini-oral abstract presentations.



The 11th INTEREST Workshop maintained the tradition of holding the highly popular Joep Lange career guidance sessions for young and early career researchers that were introduced in 2015. Early morning sessions on acquiring research grants also attracted early career researchers, as did poster discussions led by members of the Workshop's organizing and scientific committees. Malawi's Augustine Choko won the Joep Lange INTEREST award for the highest scoring scientific abstract, presenting research entitled, "One year outcomes following availability of HIV self-testing in Blantyre, Malawi." The Joep Lange INTEREST award provides registration, accommodation, and travel to the next INTEREST Workshop. The 2018 INTEREST Workshop will be held in Kigali, Rwanda, 29 May- 1 June 2018.

Jacqueline van Tongeren's interest in the arts (together with Joep Lange, AIGHD's founder of the Workshop), was reflected in an art installation by a local artist, Elson Kambalu. The artwork was displayed during the workshop, and in several demonstrations of Malawian dancing. The art installation, entitled 'Between humans and a goal post', called on all participants to 'play the ball' and to reflect on a single message about HIV that they could pass onto their communities. During an outreach event, the installation was displayed in a community in Lilongwe, where it generated much enthusiasm.

SELECTED KEYNOTES & PRESENTATIONS



Anthro@100, Philippines

Anita Hardon

Presentation: "Modernizing Frontier: Chemical Transformations of Young People's Minds and Bodies in Puerto Princesa"



IAS Conference on HIV Science, France

Cate Hankins

Closing Plenary Session: "Rapporteur Presentation Track D Implementation Science"



NIH/NIAID TB Transmission Workshop, Cape Town

Sabine Hermans

Presentation: "Recurrent Tuberculosis Disease in an HIV-Hyperendemic Setting"



HIV Molecular Research Group, Dublin

Peter Reiss

Invited Keynote speaker: "Co- and Multimorbidity in people ageing with HIV" at the inaugural European HIV Seminar, University College Dublin School of Medicine



19th Bangkok International Symposium on HIV Medicine, Bangkok

Peter Reiss

Invited Plenary speaker: "Co- and Multimorbidity in people ageing with HIV"



Wageningen University, The Netherlands

Wendy Janssens

Invited seminar: "The Power to Protect: Intra-household Bargaining and Female Condom Use"



Oxfam Novib, The Hague

Wendy Janssens

Invited seminar: "The Impact of a Female Condom Intervention in Mozambique: Results from a Randomized Control Trial"



TBnet Academy 2017, Armenia

Frank van Leth

Four-day masterclass for early-career physicians and researchers in the field of tuberculosis



The 5th International Scientific Conference of the Med-Vet-Net Association, United Kingdom

Constance Schultz

Invited speaker: "Antimicrobial resistance: the human-animal interface in Vietnam."



Canadian HIV Trials Network Annual Meeting, Toronto

Cate Hankins

Presentation: "Current priorities in HIV research: What Canada can contribute"



10th European Congress on Tropical Medicine and International Health, Antwerp

Anja van't Hoog

Presentation: "Stakeholders' perceptions and practices regarding hypertension, pharmacy-based care, and e-monitoring in urban Nigeria"



10th European Conference on Tropical Medicine and International Health, Brussels

Chris Pell

Invited speaker: "Community engagement and the social context of mass antimalarial administration in South East Asia"

KEY EVENTS

Lecture Room 4, AMC Meibergdreef 9, 1105 AZ - Amsterdam Friday, 09 June 2017 14:00 - 17:00

Symposium Big Data, eHealth & Education

Speakers
Madis Tiik
Nicky Hekster
Hans Romijn
Onno Schellekens
Fransje van der Waals

Organizers
www.amc.nl
www.aighd.org
www.healthefoundation.eu
www.iocelaneinstitute.org

GLOBAL HEALTH SYMPOSIUM: BIG DATA, E-HEALTH & EDUCATION

Organized by AIGHD, AMC and Health[e]Foundation
09 June 2017

The Big Data, eHealth and Education symposium explored a wide arena of topics with a focus on helping patient and health care workers manage the life source data that are becoming available to both groups as well as collection and the power of new tools and technologies. The symposium also shared learnings from the Estonia experience.

The five presenters were Hans Romijn, Fransje van der Waals, Nicky Hekster, Onno Schellekens and Madis Tiik.

INAUGURAL LECTURE: PROF. DR. CONSTANCE SCHULTSZ

14 September 2017

The inaugural lecture "The Next Generation" by Constance Schultsz took place at the aula of the University of Amsterdam. Her lecture focused on emerging infectious diseases and antibiotic resistance (AMR). AMR is a complex issue that involves many different components, such as access to care and antibiotics, both physician and patient behavior, and the economic interests of the human, veterinary and agricultural fields in both public and private care.



PUBLICATION HIGHLIGHTS

AIGHD AUTHOR

URBANIZATION AND HEALTH

Uptake of health services among truck drivers in South Africa: analysis of routine data from nine roadside wellness centres.

Cate Hankins, Gabriela B. Gomez

BMC Health Services Research. 2017;17(1):649. doi: 10.1186/s12913-017-2595-3

ANTIMICROBIAL DRUG RESISTANCE

Import and spread of extended-spectrum β -lactamase-producing Enterobacteriaceae by international travellers (COMBAT study): a prospective, multicentre cohort study.

Constance Schultz

Lancet Infectious Diseases. 2017;17(1):78-85. doi: 10.1016/S1473-3099(16)30319-X

Delays and loss to follow-up before treatment of drug-resistant tuberculosis following implementation of Xpert MTB/RIF in South Africa: A retrospective cohort study.

Anja van't Hoog, Frank Cobelens

PLoS Medicine. 2017;14(2):e1002238. doi: 10.1371/journal.pmed.1002238

HIV-1 drug resistance before initiation or re-initiation of first-line antiretroviral therapy in low-income and middle-income countries: a systematic review and meta-regression analysis.

Raph Hamers, Seth Inzaule

Lancet Infectious Diseases. 2017. doi: 10.1016/S1473-3099(17)30702-8

Antimicrobial resistance in uropathogens and appropriateness of empirical treatment: a population-based surveillance study in Indonesia.

Adhi Kristianto Sugianli, Franciscus Ginting,
Menno De Jong, Frank van Leth, Constance Schultz

Journal of Antimicrobial Chemotherapy. 2017;72(5):1469-1477. doi: 10.1093/jac/dkw578

Zoonotic Transmission of mcr-1 Colistin Resistance Gene from Small-Scale Poultry Farms, Vietnam.

Trung Vinh Nguyen, Anita Hardon,

Emerging Infectious Diseases. 2017;23(3):529-532. doi: 10.3201/eid2303.161553

Constance Schultz

CHRONIC CARE AND AGING

No evidence for accelerated ageing-related brain pathology in treated HIV: longitudinal neuroimaging results from the Comorbidity in Relation to AIDS (COBRA) project.

Rosan van Zoest, Ferdinand Wit, Peter Reiss

Clinical Infectious Diseases. 2018. doi: 10.1093/cid/cix1124

Cardiovascular disease prevention policy in HIV: recommendations from a modelling study.

Rosan van Zoest, Ferdinand Wit, Peter Reiss

Clinical Infectious Diseases. 2017. doi: 10.1093/cid/cix858

INFECTIOUS DISEASE ELIMINATION

From latent to patent: rethinking prediction of tuberculosis.

Frank Cobelens

Lancet. Respiratory Medicine. 2017;5(4):243-244. doi: 10.1016/S2213-2600(16)30419-2

HIV pre-exposure prophylaxis and early antiretroviral treatment among female sex workers in South Africa: Results from a prospective observational demonstration project.

Gabriela B. Gomez

PLoS Medicine. 2017;14(11):e1002444. doi: 10.1371/journal.pmed.1002444

HEALTH MARKETS AND FINANCING

The effect of health insurance and health facility-upgrades on hospital deliveries in rural Nigeria: a controlled interrupted time-series study. Health policy and planning.

Daniella Brals, Sunday Adedeji Aderibigbe,
Ferdinand Wit, Marijn van der List,
Marleen Hendriks, Michael Boele van Hensbroek,

Oxford Academic. 2017;32(7):990-1001. doi: 10.1093/heapol/czx034

Constance Schultz

Catastrophic costs potentially averted by tuberculosis control in India and South Africa: a modelling study.

Gabriela B. Gomez

Lancet Global Health. 2017;5(11):E1123-E1132. doi: 10.1016/S2214-109X(17)30341-8

AIGHD UGANDA 2017

REPORT FROM OUR OFFICE IN KAMPALA



STRENGTHENING CLINICAL RESEARCH CAPACITY IN SUB-SAHARAN AFRICA

The ARISE (Africa Research Initiative and Support Network) consortium was founded in 2012 as a joint venture of the existing COMMAL (College of Medicine – Malawi Amsterdam Liverpool) and INTERACT (Infectious Diseases Network for Treatment and Research in Africa) programs. These programs were aimed at strengthening sub-Saharan African research and development capacity in the field of poverty-related diseases (e.g., HIV, TB, and malaria). The main objective of the ARISE consortium, which was successfully completed in June 2016, was to develop and consolidate a network of Research Support & Training Centers (RSTCs) in sub-Saharan Africa. These centers were to be embedded within local universities, and have ownership of the research conducted and operate according to ICH-GCP research standards.

Upon completion, the construction of the fourth Research Support & Training Center commenced at Makerere University, College of Health Sciences in Kampala, Uganda. While the frame is finished pending partitioning, the College is looking for funds to complete the building and construction is still underway. The current stage of the construction of the Research Support Center was funded by NACCAP II ARISE Network, with additional funds from Wellcome Trust and the United States National Institutes of Health (NIH).

Construction of the Research Support Center building at the Makerere University College of Health Sciences at the New Mulago complex in Kampala, Uganda



Dr. Andrew Kambugu facilitates a GCP Training session in July 2017 at Makerere University College of Health Sciences.

GOOD CLINICAL PRACTICE TRAINING

AIGHD, in collaboration with the Clinical Trials Unit at the Makerere University College of Health Sciences, conducted Good Clinical Practice (GCP) trainings in Uganda between February and December 2017 with a total of 160 participants. The two-day certificate course is recognized by the Uganda National Council for Science and Technology. Course participants were drawn from various medical and organizational backgrounds, including physicians, medical officers, pharmacists, lab technologists, Independent Review Board members, IT and data professionals, and research assistants.

REORGANIZATION OF THE ADMINISTRATIVE OPERATIONS IN UGANDA

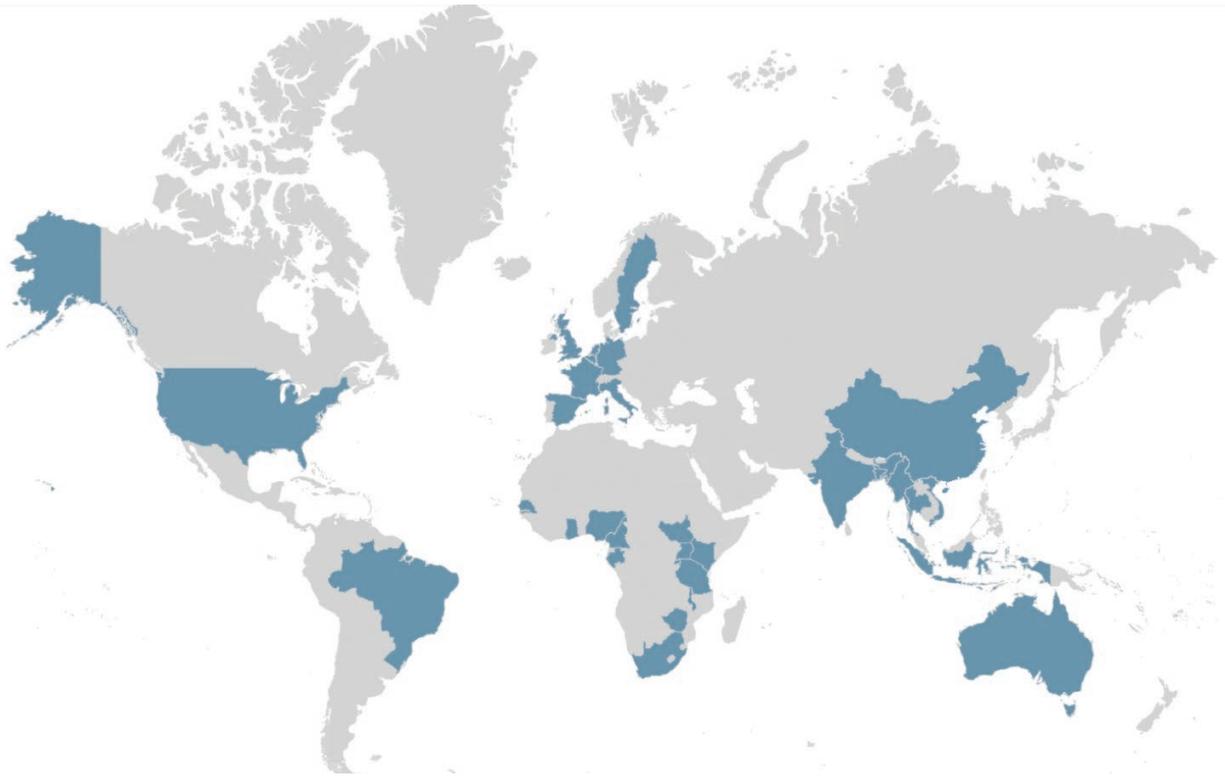
A re-structuring process of the administrative operations

in Uganda culminated in the transitioning and embedding of the clinical trial monitoring and data management operations into the Clinical Trials Unit (CTU) at Makerere University under the School of Public Health, as originally planned within the ARISE framework.

TECHNICAL AND SCIENTIFIC COLLABORATION

AIGHD continues to have a strong scientific and technical collaboration with Makerere University, and the Memorandum of Understanding Makerere is currently undergoing a renewal process. AIGHD is represented through a Director based within the Clinical Trials Unit. The Principal of the Makerere College of Health Sciences visited the AIGHD office in Amsterdam in May to explore further opportunities for strengthening the scientific cooperation between AIGHD and Makerere University.

2017 WHERE WE WORK



Locations of our partners, funders and projects in 2017 include:



Africa

Cameroon, Gabon, Ghana, Kenya, Malawi, Nigeria, Rwanda, Senegal, South Africa, South Sudan, Tanzania, Uganda, Zimbabwe



Asia & Pacific

Australia, Bangladesh, China, India, Indonesia, Myanmar, Thailand, Vietnam



Europe

Belgium, France, Germany, Italy, Netherlands, Spain, Sweden, United Kingdom



North & South America

Brazil, USA

FINANCIAL REPORT

The Amsterdam Institute for Global Health and Development is a not-for-profit organization based in Amsterdam and was established on 18 December 2006. On 14 April 2011, the legal entity was changed from Stichting AMC CPCD Foundation to Stichting Amsterdam Institute for Global Health and Development.

Financials

The total income in 2017 amounted to EUR 7.85 million (2016: EUR 11.09 million), including funds passed on to project partners. AIGHD ends the financial year in 2017 with a deficit of EUR 357,506 (2016: surplus of EUR 473,902) from its operational activities. The negative result is largely caused by a one-time provision that had to be made as AIGHD awaits a final installment of project funds.

In 2017 the Amsterdam Institute for International Development (AIID) has been incorporated within AIGHD. This resulted in an addition to the 'continuity reserve'. Once the negative result for the financial year 2017 and the addition for the incorporation of AIID is processed, a surplus of EUR 1,305,076 remains. This reserve will be used to secure the continuity of AIGHD and/or support its statutory goals.

The financial statements have been prepared in accordance with the Guideline for Annual Reporting 640 'not-for-profit organizations' of the Dutch Accounting Standards Board. Contrary to these guidelines, the overall budget level has not been included, as budget control has been performed at project level.

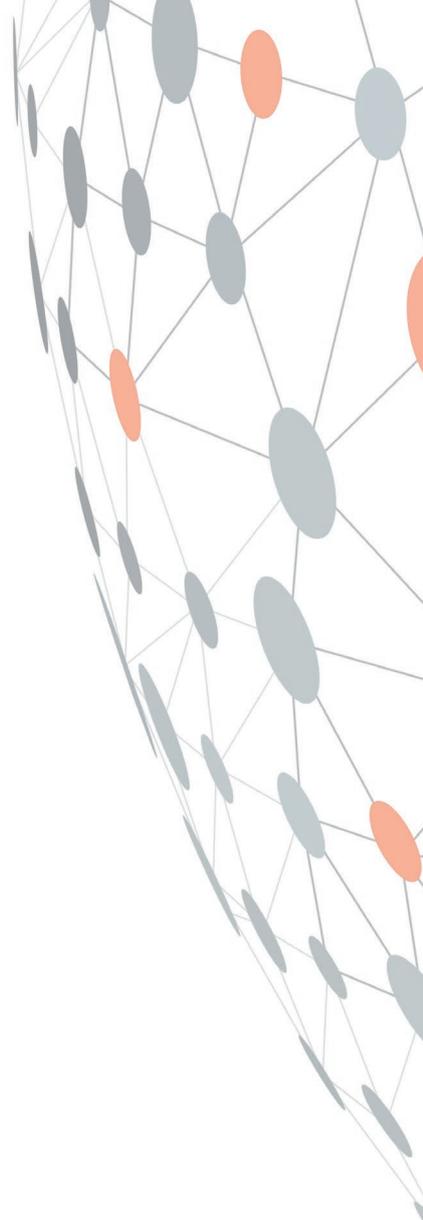
AIGHD is currently in contact with the tax authority

concerning the handling of VAT. The main point of discussion is the accuracy of VAT deductions in past declarations. We anticipate that the outcome of this discussion will take some time. AIGHD is currently in the process of consulting a tax consultant.

Managing Risk

Risk analysis and risk mitigation remain important for AIGHD. Discussions have been initiated between the Executive Board and the Supervisory Board about AIGHD's strategy for analyzing, weighing and mitigating risks. At the institutional level risk mitigation has improved by further strengthening the annual budget cycle, including a more detailed annual budget and more frequent monitoring of expenditures. The Executive Board is currently not aware of any significant changes in the organization's internal control that occurred during 2017 that has materially affected, or is reasonably likely to materially affect, the organization's internal control over its finances. The main risk identified is the limited lifetime of the existing project portfolio and the need for replenishment of that portfolio to remain financially sustainable.

With a number of new projects starting in 2018 and implementation of various strategies for grant acquisition as well as for expanding available funding for Global Health in The Netherlands and the European Union we expect to sustain if not improve our project funding base. At the project level, processes for analysis and mitigation of risks related to (new) partner institutions are in development.



AHTC, Tower C4
Paasheuvelweg 25
1105 BP Amsterdam
Netherlands

Phone: +31 20 210 3960
Website: www.aighd.org
Email: info@aighd.org