

# Joep Lange Institute

Progress Report 2016

JOEP LANGE  
INSTITUTE  
REPORT



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MOVE

## I. INTRODUCTION

**Well before the untimely death of Dr. Joep Lange and Jacqueline van Tongeren in the MH17 disaster of July 2014, Joep had been thinking about creating a platform that would bring together global health, technology, economics and development. And, most importantly, leverage the collective expertise of scientists, activists and implementers to make health markets work for the poor. Just over a year ago, this dream became a reality in an institute carrying his name.**

In its first year, the Joep Lange Institute has supported a broad range of digital innovations, innovative research and new approaches to healthcare financing. Building on Joep's legacy, we aim to demonstrate that inclusive healthcare is indeed possible, and advocate for better policies to achieve it. Projects range from home-based hypertension care delivery to Hepatitis C health impact bonds and the revolutionary M-TIBA digital health platform.

We've seen first-hand how M-TIBA connects payers, patients and providers in the slums of Nairobi and supported world-renowned behavioral economist Dr. Dan Ariely and his team to study how we can get people to save for health using M-TIBA. The potential of this platform to change how health markets work for the poor is amazing and we intend to continue supporting its development.

During the first Joep Lange Institute lecture, World Bank President Dr. Jim Yong Kim challenged us all to think differently and to be activists in global health. The rise of digital technology, especially in Africa, offers unprecedented opportunities to address market failures and democratize healthcare. In combination with innovative finance, technological innovation will enable better data, better quality of care, lower costs and less risk throughout the healthcare value chain. It can help us not only to reach more people than ever before, but also to reach them directly. This can drive exponential change for millions of people, helping them realize their 'Great Escape' out of poverty.

ACTIVIST

**‘To those who regularly visit sub-Saharan Africa, the pace of change is indeed astonishing, and there are many reasons to be optimistic about the region. We should, however, also realize that very little has changed for the poor in rural settings, and that the lives of those who left for urban slums are extremely difficult. To include these groups in the ‘great escape’ from poverty is the big challenge ahead.’**

**Joep Lange, July 2014**

Joep Lange was a prominent doctor, a leading HIV/AIDS scientist, and an activist for access to better healthcare. He never shied away from pointing out the real issues and worked tirelessly to address them. He had neither the time nor the patience to concern himself with political sensitivities. The patient always came first, whether it was one of his own patients in the Netherlands or someone he had never met in a country where effective care was out of reach.

He pushed the envelope in the field of global health, applying innovations, conducting groundbreaking research, setting up controversial partnerships with the private sector and testing new financing mechanisms in countries where no one thought it would be possible.

Joep was especially pragmatic when it came to applying science to real-life settings. Innovations should work not only in the lab, but in the real world. By combining research and action he was able to demonstrate that HIV/AIDS treatment in Africa was feasible, and that the delay in delivering it was thus a political choice. This forced international government agencies, donors and the private sector to reevaluate their positions.

In the words of former US President Bill Clinton, ‘through Joep’s vision and untiring devotion, AIDS treatment has now saved millions of lives across Africa, and all around the world, and given us hope for a day when AIDS is a thing of the past.’

Not limited to HIV/AIDS, Joep’s focus expanded to making healthcare finance and delivery more effective. The Joep Lange Institute builds on his legacy.

## II. JOEP LANGE INSTITUTE'S STRATEGIC AGENDA

### THE INSTITUTE AS A CATALYST FOR DIGITAL INNOVATION IN GLOBAL HEALTH

To create change, innovations must demonstrate that it is possible and affordable to include the poor in practice. When all practical obstacles can be shown to be irrelevant, the discussion is reduced to one of political will. The core work of the Joep Lange Institute, therefore, is a combination of advocacy, research and implementation:

- The JLI sets a global health and development agenda that focuses on technological innovation, putting the patient front and center.
- With our research and implementing partners, promising solutions are being tested in practice to improve and establish their economic viability and medical effectiveness in real life. JLI actively supports an enabling environment for innovations in global health that fit the agenda.
- The JLI advocates policy change based on the evidence of what works and what doesn't. Because ultimately, the great escape of the poor depends on the political will to make healthcare truly inclusive, affordable and effective for all.

The Joep Lange Institute encompasses the Joep Lange Chair and Fellows Program. This academic program is housed within the Global Health Department of the Amsterdam Academic Medical Centre (University of Amsterdam), and receives support from the Dutch Ministry of Foreign Affairs. The program brings together experts from different backgrounds and geographies to collaborate on research that will help drive change in the field of global health. This multidisciplinary approach is echoed in the unique rotating character of the Chair, which will welcome up to five (partly concurrent) professors from different fields of expertise. *More about this program can be found under 'Activities'.*

**‘There is a very high cost to not acting on issues that are right in front of you today.’**

**Jim Yong Kim**

## THE JLI DIGITAL ACTION AGENDA

We believe the above approach to innovation will have great impact on global health, including the global fight against HIV/AIDS which has and will remain the starting point for our work. As in HIV/AIDS, demonstrating that practical barriers for access and effective care can be overcome, will expose the fact that global health is ultimately about political will.

Based on the vision set out above, the Digital Action Agenda of the Joep Lange Institute covers the following key areas:

- **Transparency and targeting**

*poverty & disease mapping*

*reducing information asymmetry: better insight into access, quality and costs*

- **Digital health services and value based outcomes**

*products and services for diagnostics, treatment, adherence, prevention*

*standards for healthcare in resource-poor settings*

*supply chain efficiency*

- **Innovative finance**

*Health Impact Bonds*

*new types of risk pools*

*peer-to-peer remittances and other forms of facilitated solidarity*

Activities in this field will be directly linked to aspects of the Digital Action Agenda wherever possible.

In addition, crucial insights supporting the Agenda are expected to be gained from investments in:

- **Behavior, institutions and technology**

In healthcare as in every other field of human endeavor, human behavior ultimately determines if and how transactions and investments materialize. Digital technology uniquely facilitates and enables intervention at an individual level – including the individual behavior of patients and medical professionals.

In economics, after a long period during which perfect rationality was assumed, the role of behavior is now being recognized more and more, in academia as well as among policy makers and business leaders. For example, the concept of limited or “bounded” rationality in making economic decisions is now seen as crucial in studying, influencing or entering markets. The same mental shift must be made in healthcare, both at the systems level (think of adverse selection and other unwanted incentives) and with regards to individual interactions relating to diagnosis, treatment, adherence and prevention. This is especially the case in situations of poverty and other forms of insecurity.

The first steps have been made to stimulate this shift. Renowned behavioral economist and psychologist Professor Dan Ariely of Duke University has been appointed the first holder of the Joep Lange Academic Chair. Ariely held a Joep Lange Institute talk followed by a workshop for medical practitioners. An extensive partnership including product development studies in Kenya is also linked to his professorship. With his applied research team, Ariely is testing features of and incentives for the various M-TIBA based products to optimize their uptake and impact. *More information under 'Activities'.*

The Institute is specifically interested in the direct interaction between technology and behavior in health. It is clear that this relationship is very strong in the sense that technology can play a large role in influencing human behavior related to transactions, including those in healthcare. Conversely, human behavior is crucial in the design and application of innovations in healthcare and beyond. Insights into how this interaction takes place in concrete situations is of great importance for the work of the Joep Lange Institute. This is one of the areas of work being done in the partnership with Utrecht University (see 'Activities'), which also includes research on the role of institutions in the economics and the behavioral aspects of global health.

### **ACTIVATING THE AGENDA**

Digital technology, behavioral economics, innovative finance & investment are not 'standard fare' in global health discussions, policy or practice. Their potential to drastically improve healthcare for the poor, however, deserves to be taken on board by every serious actor in global health and development. The Joep Lange Institute therefore invests significantly in advocacy of its digital action agenda, with the goal of creating and stimulating high-level innovators. The Institute doesn't just promote its agenda; it aims to obtain the active participation of the people and institutions in its network in promoting, implementing and enriching it. Our activism is therefore first of all aimed at building and reinforcing networks in the relevant fields of policy, science and implementation.

Both through advocacy and by initiating and co-financing research, academic agendas will be encouraged to fill the gaps in data, insights and evidence. The Joep Lange Institute will commission or otherwise stimulate translational science as well as analyses for better healthcare delivery and business. Policy makers will be informed about the digital revolution that is taking place in many industries and the impact it is projected to have on healthcare. Investors, business leaders and other innovators in the practice of health in developing countries are engaged and activated by offering opportunities for practical collaboration, and by asking them to present their work at high-profile events. A fund will be established to invest in promising innovations and to actively support their success and their impact.

The JLI approach includes tapping into the venues, media, and groups where experts in the various fields of global health convene and co-create. Rather than inviting them, for example, to events organized around our digital agenda, we aim to present them with digital solutions and insights directly relevant to their respective fields of work at the conferences they already attend. The same goes for publications, an initial example being the recent article the JLI co-authored on an experiment with a cashless clinic, in the *World Hospitals and Health Services Journal* of the International Hospital Federation. We believe this to be effective in identifying, engaging and galvanizing the innovative forces that exist in every field.



## **MAKING HEALTH MARKETS WORK FOR THE POOR**

In much of the developing world, the public sector is unable to provide quality healthcare for the whole population, effectively excluding large groups of people. These kind of markets become private by default. At the same time, the poor pay large parts of their care out of pocket. The unpredictable nature of these costs result in huge medical and economic risks for them. On a business level, they hamper investments and consequently general development.

The vision of the Joep Lange Institute is that digital technology will revolutionize access, quality and inclusiveness of healthcare markets, thus transforming global health, poverty and development. In combination with medical innovation, insights from behavioral sciences and innovative forms of financing, digital technology can repair critical market failures, enable viable business cases for treatments at the base of the pyramid, and attract new sources of financing and investment. Markets can be made more transparent, transaction costs reduced drastically, and data can be collected and analyzed at unprecedented levels. In the digital age, even the very poor can be recognized and empowered as individuals; At virtually zero marginal cost, everybody can be reached. The incredible, liberating success of mobile-phone based financial services in countries where only the rich have bank accounts is testimony to this.

Digital technology can help solve a fundamental problem that makes healthcare markets particularly complex: the division between the beneficiary, the decision maker, and the payer of a transaction (in healthcare: a test, a treatment). It can create a bridge between improvements at the systems level and actual change in the way individual interactions take place between medical professionals and patients.

**‘Thinkers are many. But it’s thinkers who turn their thinking into action who make social justice happen.’**

**Khama Rogo**



## **M-TIBA AND THE MOBILE REVOLUTION IN AFRICAN HEALTHCARE**

Much of the work of the Joep Lange Institute is associated with M-TIBA: Africa's digital platform for inclusive healthcare, founded by PharmAccess and other partners of the Institute. M-TIBA directly connects patients, healthcare providers and healthcare payers (insurers, donors), and exchanges money and data between them. M-TIBA not only empowers consumers, it also improves financial protection, generates local and international financing for health, and supports better quality of care.

Patients connect with M-TIBA through a 'health wallet' on their mobile phone containing money and entitlements specifically for healthcare. They can save into their own wallets (which they can use for their family's health) or they can receive money from more affluent relatives elsewhere in the country, from donors and even from individuals in other countries. M-TIBA supports new digital solidarity mechanisms where the rich pay for the poor, the healthy for the sick, the young for the old, communities for an individual. The platform builds on existing solidarity instruments such as the popular chama saving groups or the harambee personal fundraisers, greatly increasing efficiency.

Just nine months after its launch in Kenya, M-TIBA had already registered over 500,000 people as users or dependents, and uptake continues to grow rapidly. More than 300 clinics are already connected to the platform and participating in its mandatory SafeCare quality program. With M-TIBA, the patients themselves choose where to go for healthcare.

The platform is open to effective third-party products and services, and is currently offering four initial products for use in the health wallets:

- A savings product offers incentives to people to save money for their health and that of their families – individually or collectively, in chama groups for example.
- An 'empower others' product allows people to remit money to faraway relatives or other dependents – with the certainty that it will be used for health. This product will also be rolled out for international remittances.
- A local health benefit product, that now centers around Gertrude's Hospital Foundation's Smile program, is active in four outreach clinics in Nairobi slums.
- A cash advance: credit given to healthcare providers based on their mobile money turnover. It is usually very difficult for clinics at the base of the pyramid to get a loan. The real-time transaction information from the digital wallet now makes this much easier and also less costly.

The M-TIBA platform furthermore makes it possible to identify vulnerable groups, such as pregnant women living with HIV/AIDS in the slums, and place money or entitlements for treatment directly into their hands, via their mobile phones. Data on actual usage of care are fed back with each transaction. This creates great opportunities for improving the efficiency and effectiveness of donor-driven entitlements and pharmaceutical access programs.

Drug entitlements can be linked to diagnostic results, payment can be linked to performance, supply chains can be monitored and improved, reporting becomes far more accurate as well as easier. 'Digital health services' can be developed to make patient journeys more efficient and to improve health outcomes in areas like HIV, malaria or pregnancy-related services for mothers and children. Among the many digital health services that can be facilitated by the M-TIBA platform, the Institute has chosen home-based hypertension management as the first concrete opportunity to be developed and tested in the field. More about this program can be found under Activities.

The M-TIBA health wallet was developed in partnership with Kenya's largest telecoms operator Safaricom and is now only available in Kenya. Plans for roll-out in other countries are being developed and several large private and public funders have committed millions to its success. We believe M-TIBA will prove to be a crucial accelerator of digital innovation for inclusive healthcare markets and form a unique bridge between the JLI's agenda and the practice of healthcare in Africa. The Institute will therefore focus much of its work on maximizing the impact and the sustainability of the M-TIBA platform.

**People.** The demand-side interface of M-TIBA is a mobile health wallet that allows people to send, save and receive digital money and entitlements that can only be used for health – directly on their phone.



**Payers.** Governments, donors, insurance companies and even individuals can now directly reach vulnerable groups or family members. M-TIBA's digital infrastructure provides near real-time data and allows for precise targeting, like pregnant women living in the

slums. Payers can offer tailored products like digital insurance or vaccination vouchers. They can also encourage people to save for health by offering top-ups if people deposit a certain amount into their M-TIBA account.

**Healthcare providers.** On the supply side, M-TIBA is a digital platform. It connects healthcare providers to people who are able to pay for services. Digital payments minimize leakages and enhance safety and efficiency. Insights from medical and financial data can help providers to improve on both the clinical and business side of operations through SafeCare. In addition, we strengthen cost-effectiveness of service delivery through mechanisms like joint procurement systems, access to finance for quality improvement or capacity building through e-learning.

### III. ACTIVITIES

1. Joep Lange Institute events
2. Joep Lange Chair & Fellows Program
3. Behavioral Science for Healthcare
4. Home-based Hypertension Management Innovation
5. Institutions, behavior and technology
6. Hepatitis C Health Bond
7. INTEREST Conference Cameroon
8. HIV Research Trust Scholarship
9. Other JLI activities

#### 1. JOEP LANGE INSTITUTE EVENTS

Engaging the global health community to promote the digital agenda is also the aim of the lectures, webinars and further events that the Joep Lange Institute organizes. The speakers are well-known experts from the policy, science or practice of global health. We challenge them to give their view on innovation in their area of expertise and to discuss the potential they see for the future of global health. The audience, both online and physically present, is given the opportunity to pose questions to the speaker or – depending on the setting – to engage in discussions. Wherever possible, events are connected to either existing or new research and innovation programs.

#### Inaugural event of the Joep Lange Institute - March 15th 2016

*"Up with the optimists!"*

"Today we are together to celebrate a historic event: the Inauguration of the Joep Lange Institute," said Princess Mabel van Oranje, who opened the event. On Tuesday March 15th, 400 family, friends, colleagues and thought leaders from business, politics, civil society and global health research were present in the Concertgebouw in Amsterdam for the official launch. At the event numerous top speakers shared their views on how the Institute will build on Lange's legacy.



"As you all know Joep left us a rich legacy and also a lot of unfinished business," Princess Mabel continued. Building on the legacy of Joep Lange, the institute will combine science, pragmatism and activism. "Joep understood that the poor are on their own and have to rely on markets to access healthcare. The Joep Lange Institute will work on this agenda," said Onno Schellekens, Chair of the Joep Lange Institute Board. "We will design and test the possible solutions on the ground, to see what works and what doesn't. And when it works we advocate relentlessly for policy change."

Echoing Sir Winston Churchill, Rogo reminded the audience that the price of greatness is the ability to take responsibility for your thoughts. "Thinkers are many. Many of us here are great thinkers, and there will be many more. But very few take responsibility for the things that they think through. It's thinkers who turn their thinking into action who make social justice happen."

*Click [here](#) to watch full version of the inaugural event.*

### **Dr. Jim Yong Kim – July 6th 2016**

*Dr. Jim Kim calls for next generation activists to tackle global health challenges*

World Bank Group President Dr. Jim Yong Kim delivered an inspiring and activating Joep Lange Institute lecture about tackling the global health challenges of our time. After referencing the feats of activists like Martin Luther King, Joep Lange and the Act Up movement, Kim deliberately focused his attention on the activists of the future, confronting the audience with the 'fierce urgency of now'.

Putting the importance of health into economic context, Kim stated that between 2000 and 2011, about 24% of the growth in full income of developing countries resulted from improvements in health. "Investments in human capital in developing countries are therefore the best investment we can make as this improves their ability to compete in the economies of the future."



He recalled the early days of HIV/AIDS, when treatment in Africa was deemed impossible. To the 25 million HIV-infected people in Africa at that time, Kim remembers, '...99.9% of public health professionals were basically saying "Sorry, you're dead."' This was, according to Kim, the mental model at that time. Joep Lange changed this mental model and showed that treatment was feasible. Kim further emphasized the need to leverage the power of the private sector and its financial mechanisms to reduce risk and overcome poverty. 'The only morally defensible path is to try to create equal opportunity for everyone.'

Kim said optimism is a moral choice. 'There is a really high cost for not acting on issues that are right in front of us.' Dr. Kim, still an activist at heart, left the audience with a simple question: What are you going to do?

Over 250 guests and students from the fields of medicine, business, politics, the arts, civil society and global health research attended this first Joep Lange Institute Lecture at the Diligentia Theater in The Hague. Many more people were reached through other means of communication (find these and other statistics under IV. Publicity).

*Click [here](#) to watch the full lecture.*

### **Professor Dan Ariely – November 9th 2016**

*"We know what is the right thing to do, but still we don't do it"*

Doctors regularly find that their patients are not able to stick to the care plan they were prescribed. This has a negative effect on health outcomes and also makes healthcare more expensive. So what if doctors can influence behavior to help people make better health choices?

### **Workshop**

Even though adherence to treatment and preventive care can decrease healthcare costs and result in better health outcomes, behavioral aspects of medical care are hardly applied in daily practice. 'Being motivated by long-term outcomes is not part of human thinking,' says Ariely. Insights from behavioral economics can help doctors to increase their understanding of what motivates patients to change their behavior.

With this in mind the Joep Lange Institute organized a morning workshop on treatment adherence, inviting medical doctors, scientists and special guest Dan Ariely and his team. The aim of the workshop was to brainstorm together on patients' difficulties to adhere to chronic care and the potential solutions to overcome these barriers. It led to interesting first discussions, for instance on how to find a way to turn long-term effects into short-term actions to convince people to change their behavior. Recommendations that came out of the workshop include paying attention to the little details of the patient's daily life, focusing on processes rather than outcomes and concentrating on positive feedback.

*Click [here](#) to read the full report of the workshop.*



## Lecture

In the afternoon, Professor Ariely held his first lecture for the Joep Lange Institute. 'In the future we are all wonderful people. In reality we are always tempted to misbehave. Temptations are the biggest barriers to health and are in fact killing us,' he started. As he then went on to elucidate, goals and objectives don't matter much: 'Being motivated by long-term outcomes that fluctuate over time is not part of the human system. Let's focus on the small details. Shift the focus from outcome to action.'

That people actually behave differently than they say they will, has long been acknowledged by almost every industry in the world. These insights on actual human behavior are often successfully implemented to further business interests. The healthcare sector, however, is conspicuously lagging behind in this respect, but if there's one field that can't afford to ignore behavioral economics, it's health. 'The combination of global health, health, and social science, is incredibly important, has a huge potential. I'm proud to be part of the Joep Lange Institute,' Ariely said.

Interventions to help patients make better decisions should therefore be focused on lowering the barriers to taking healthy decisions. Just handing patients information or asking them how they feel, or what they think, is not enough. 'We know what is the right thing to do, but still we don't do it' – human motivation is incredibly complex, we have all the information on the detrimental effects of eating too much, not exercising enough, or not taking our medication as prescribed. But information rarely helps in changing behavior, Ariely stated. The most effective interventions to change people's behavior are focused on changing their environment and social context.

Take tooth brushing, for example. How come its compliance is so incredibly high compared to actual life-saving behavior such as adhering to your doctor's drug and lifestyle recommendations? Why do we all agree that we should brush our teeth at least once a day – and actually do it, too? According to Ariely, we are not doing this because we still want to have all our teeth in ten years' time: 'We do this because we want to be socially accepted.'



Anticipating patient behavior and applying well-known techniques to help patients make better health decisions has yet to become part and parcel of medical thinking. In chronic care, for example, many doctors see that their patients have great difficulty taking their medicines consistently and on time. If we can better understand human decision-making – and design global health systems and treatment regimens accordingly – we can reduce costs, increase access to care and improve health outcomes.

*Click [here](#) to watch the full lecture.*

**‘If we only think about the biology of health,  
we’re going to miss a big part of the process.’**

**Dan Ariely**

## **2. JOEP LANGE CHAIR & FELLOWS PROGRAM**

The Joep Lange Institute encompasses the Joep Lange Chair and Fellows Program. This academic program is housed within the Global Health department of the Amsterdam Academic Medical Centre (University of Amsterdam), and receives support from the Dutch Ministry of Foreign Affairs. The Ministry announced its support for the Chair at the commemorative ceremony for Joep Lange and Jacqueline van Tongeren, with the aim to promote collaborative research and achieve groundbreaking progress in health systems and service delivery in low- and middle-income countries.

The Chair and Fellows program brings together experts from different backgrounds and geographies to collaborate on research that will help drive change in the field of global health. This multidisciplinary approach is echoed in the unique rotating character of the Chair, which will welcome up to five (partly concurrent) professors from different fields of expertise in five years. In partnership with the top academic institutes in Africa, Asia, Europe and the United States, the Chairs and Fellows will focus on building the knowledge base of global health and collaborate with organizations that can apply these insights to improve access to quality healthcare across the globe.

The first two Chairs were announced in 2016: Dan Ariely, world-renowned behavioral economist from Duke University, and Mark Dybul, Executive Director at the Global Fund to fight AIDS, Tuberculosis and Malaria. Both highly distinguished professors will apply their specialist backgrounds to conduct research to make healthcare more affordable and accessible.

## **3. BEHAVIORAL SCIENCE FOR HEALTHCARE**

The Joep Lange Institute has formed a strategic alliance with the Center for Advanced Hindsight (CAH), a group of behavioral economists from Duke University, led by Professor Dan Ariely. The JLI has committed to a grant for Ariely’s CAH to conduct research around M-TIBA in Kenya. Currently, CAH and Professor Ariely are engaged in multiple concrete projects with JLI’s partner organization PharmAccess.



The goals of the portfolio of projects held by PharmAccess and CAH are to better understand and act upon the multiple behavioral issues that affect sustainable financing of, and adherence to, quality healthcare in various African settings where PharmAccess operates.

CAH will design and test interventions aimed at increasing both individual and group endorsement of pre-paying for health expenses through the digital platform M-TIBA. Research topics include incentives to increase health savings, how to increase remittances for healthcare (through care-givers, family members, rich to poor, etc.), and what is the most effective way to present information in order to empower patients to make better decisions about their health, through the use of mobile technology.

On the supply side, CAH will study strategies to motivate healthcare providers to adopt and apply M-TIBA. CAH will identify the barriers to the adoption of the platform and test interventions designed to overcome these barriers.

#### **4. HOME-BASED HYPERTENSION MANAGEMENT INNOVATION**

The goals of this project are to develop and test a new model of hypertension care delivery that uses mobile technology to offer home-based care with self-monitoring and self-titration, including behavioral incentives to improve treatment adherence. The Amsterdam Health and Technology Institute (ahti), a partner of the JLI, is developing this innovation in-house, with the aim to spin-out the novel digital health product to take it to market in its four living lab locations: Durham, USA; Chongqing, China; Nairobi, Kenya; and, Amsterdam, the Netherlands.

With the focus on actually creating a novel digital health service aimed at improving access and quality in low-income settings, this project is closely aligned with the JLI's strategic areas. The Joep Lange Institute will provide the research and development funding to develop the innovation for the Kenyan market. The JLI has also provided project oversight as an integral part of the innovation team.

The purpose of this innovation is to disrupt the current model of care in developing and developed countries, which have low adherence on the part of the patients and are costly and inefficient in the cases where patients are seeking care with providers. The aim is to provide a tested and useable chronic care delivery model and tool that provides better health outcomes at lower (feasible) costs.

The project consists of developing the home-based hypertension mobile application for smart phones and mobile phones, including the behavioral incentives to ensure compliance, and a dashboard to capture patient data that providers can use to monitor and manage care at home. To develop and test the new application, ahti is rolling out beta-testing in four living labs. With partners in each living lab, ahti will further roll out a feasibility study of the app to demonstrate proof of concept as an alternative to current care models.

The envisioned outcome of the new technology development is to establish a spin-out start up that will bring the technology to market in the living lab locations. The incorporation of behavioral cues and incentives makes the innovation novel in a market that is only beginning to make headway into mobile and digital health sectors in developing countries. Specifically in Kenya there is the opportunity to collaborate with M-TIBA. Our hypertension services can be one of the first digital health services on the M-TIBA platform. We can offer a cashless system and proof of medical and financial feasibility at the same time.

## 5. INSTITUTIONS, BEHAVIOR AND TECHNOLOGY

Institutions - formal and informal - are a vital element of any health system. For example there is the entity regulating the license to operate for healthcare professionals. But there are also many self-help groups in which people, often women, create informal ways to insure themselves and each other in situations where formal insurance is lacking. The level of reliability of institutions has direct bearing on the willingness to prepay for health and to share risks – in other words, to get health insurance. If insurance companies are, for example, notorious for not paying out and getting away with it, consumers are less likely to get insurance. The same applies when medication provided at clinics often turns out to be counterfeit or otherwise substandard, which also has a negative impact on critical building blocks of effective health systems. Just like health insurance, investments in healthcare quality are greatly dependent on the risks at play in a market and on the institutions that exist to minimize them.

The role of the state, and the position of privately organized institutions when public ones malfunction, is crucial to understanding healthcare in development settings. It is, however, hardly studied in relation to the practice and the affordability of medicine in developing countries.

The Joep Lange Institute will work with Utrecht University and other partners to promote fundamental understanding of how these mechanisms function, and what role technology can play to improve situations where public institutions do not function. The program will incorporate insights both from economic history in the developed world as well as present-day practice in developing countries. Examples of digital platforms in other industries like personal mobility or travel will be studied to better understand this and to apply insights to health systems in developing countries.

**‘Too many discoveries sit on shelves  
and in journals and books.’**

**Wafaa El-Sadr**

## 6. HEPATITIS C HEALTH BOND

Thanks to new medication, it is currently possible to effectively treat Hepatitis C (HCV). These new HCV treatment regimens are a clinical breakthrough, but require innovative finance structures for large-scale rollout in low- and middle-income countries (LMICs).

The Hepatitis C Health Bond project is aimed to structure the first HCV health impact bond around a treatment program of 150 HCV infected patients in Cameroon. We are defining an innovative financing mechanism to address the root problem of treatment for patients in Africa: they can't pay themselves and funding is not made available through public channels. Alternative payers must therefore be mobilized to pay for treatment. As in the early days of HIV/AIDS treatment, it is our intention to demonstrate that patients can be treated effectively and affordably, while avoiding abuse or diversion of the drugs. By showing that it works, we believe we can refinance the program and scale it up. To ultimately reduce the discussion from one focusing on practical obstacles to one of political will: are we willing to let patients die when they can be effectively treated at affordable cost?

With its focus on innovative financing in low-income settings, this project closely matches the vision and mission of the Joep Lange Institute.

The impact bond can provide a proof of principle of the operational success and the finance structure, which will lay the foundation for a larger scale operational and financial roll-out in Cameroon. The expected proof of success from the demonstration phase reduces the risk for the government to commit as outcome payer and, as a consequence, for prospective investors to pre-finance further scale-up. Moreover, it acts as an example for other LMICs that are faced with HCV epidemics.

The key players in the HCV impact bond are the PharmAccess Foundation (PharmAccess) as implementing organization, the Health Insurance Fund (HIF) as investor, Centre Pasteur de Cameroon (CDC) as evaluator and the Joep Lange Institute (JLI) as outcome payer. The bond structure is developed by a group of local and international professionals who are recognized in their specific fields of expertise: HCV diagnosis and treatment (medical experts), program implementation (PharmAccess), evaluation (CPC), impact bond structuring (TOTAL impact capital) and economic impact modeling (Centre for Disease Analysis, CDA).

## **7. INTEREST CONFERENCE CAMEROON**

Ending AIDS as a public health threat by 2030 was the theme of the 2016 INTEREST Conference held in Yaoundé, Cameroon, 3-6 May 2016. It attracted 369 active delegates from 34 countries, of which 22 African. The conference focused primarily on HIV treatment, pathogenesis, and prevention research in resource-limited settings. The entire scientific program took place in plenary, with presentations on treatment optimization, acquired drug resistance, care of children and adolescents, laboratory monitoring and diagnostics, implementation challenges, HIV prevention, key populations, vaccine and cure, hepatitis C, financing the HIV response, and emerging pathogens. Spirited plenary debates were held on the UNAIDS 90-90-90 treatment cascade goal and on antiretroviral pre-exposure prophylaxis.

The highest scoring scientific abstracts were highlighted in oral, mini-oral, and poster presentations. Duke University's Guido Ferrari and the Amsterdam Institute for Global Health and Development's Cate Hankins, who is also INTEREST's scientific chair, successfully competed for a USA National Institutes of Health/Fogarty International grant that provided travel support for young scientists chosen for oral abstract presentations. Cees Hesp of PharmAccess presented on mHealth for HIV on the final morning.

Brandon O'Dell of the Joep Lange Institute presented the Institute's mission and vision during the opening ceremony of the 10th INTEREST Workshop. He announced the Joep Lange scholarship, to be awarded through the HIV Research Trust to the scholar whose winning research or training proposal best aligns with the spirit of the Joep Lange Institute and the legacy of Joep Lange.

The 10th INTEREST Workshop maintained the tradition of holding the highly popular Joep Lange career guidance sessions for young and early career researchers that had been introduced in 2015. Early morning grantspersonship sessions also attracted early career researchers. Cameroon's Joseph Fokam won the Joep Lange INTEREST award for the highest scoring scientific abstract, entitled 'Ultra-deep pyrosequencing of paediatric HIV-1 drug resistance and coreceptor suggests possible suitability of protease inhibitors and maraviroc at younger ages in Cameroon'. The Joep Lange INTEREST award provides registration, accommodation, and travel to the next INTEREST Workshop. The 2017 INTEREST Workshop is being held May 16-19, 2017 in Lilongwe, Malawi.

At the closing ceremony, the Yaoundé Declaration called on African governments, UNAIDS, development, bilateral, and multilateral partners, and civil society to adopt urgent and sustained approaches to end HIV by 2030.

## 8. HIV RESEARCH TRUST SCHOLARSHIP

Honoring the legacy of Joep Lange, the Joep Lange Institute has partnered with the HIV Research Trust, based in the UK, to provide an annual scholarship for PhD students from the developing world to study in the UK. The donation shall be used by HIVRT for the sole purpose of the Joep Lange Institute Scholarship and will cover the scholarship expenses (eg, airfare, accommodation, subsistence, course fees), of up to £8000. HIVRT will manage the search and selection process, ultimately decided by two Board of Trustee members of the HIVRT.

**‘We need to stop looking at issues, stop looking at diseases, and focus on human beings.’**

**Mark Dybul**

The first scholarship winner was announced in December 2016, and is awarded to Dr. Goodluck Lyatuu. He is a medical doctor from Tanzania who is undertaking a long-distance PhD at the Karolinska Institute, Stockholm, Sweden and Muhimbili University, Dar es Salaam. Dr. Lyatuu proposes to attend an advanced course in epidemiological analysis offered at the London School of Hygiene and Tropical Medicine (LSHTM) and to apply his new skills to investigate the effect of the PMTCT-Option B+ intervention on outcomes in infants and women in routine care in Option B+ settings for his PhD thesis.

The Joep Lange Institute intends to provide this annual scholarship award for four years, with the last annual award scheduled for December 2019.

*Click [here](#) for more information on the HIV Research Trust and the JLI scholarship.*

## 9. OTHER JLI ACTIVITIES:

- May 2016: Presented at **Startup Fest** (part of the Dutch Startup Delta)
- June 2016: Participated in **European Development Days** in Brussels
- July 2016: Attended **IAS Conference** in Durban, SA
- July 2016: Participated in **UN 2030 Agenda for Sustainable Development**
- November 2016: Co-organized 2 sessions, moderated plenary opening and 2 workshops at **Third World Healthcare Forum** in The Hague
- November 2016: Gave lecture at **EDCTP-Forum** in Lusaka, Zambia

## IV. PUBLICATIONS, PUBLICITY & REPORTS

### PUBLICATIONS

- Co-authored article on the mobile health wallet 'Cashless Clinic' trial in Kenya, for the World Hospitals and Health Services Journal of the International Hospital Federation
- Two-pager on Hepatitis C Health Bond of our implementing partner PharmAccess

### PUBLICITY

- Official announcement of launch at DWDD TV show, most viewed Dutch current affairs program (1.5 million viewers)
- Article on Jim Kim lecture was shared on website Development Finance and shared through their newsletter
- Interview with Onno Schellekens in Development Finance
- Nieuwsuur broadcast on HIV drug resistance
- Article in AMC Magazine on announcement of Chair & Fellow program
- Media coverage on Lecture Dan Ariely (November 9th 2016):
  - Publication of two articles in Dutch journals: Medisch Contact & Juist (Elsevier)
  - Blog on Voormedici.nl (website for medical professionals)
  - Featured in the GBCHealth Events calendar
  - Mentioned by Dan Ariely in interview with Rotterdam School of Management (Erasmus University)
  - Duke Global Health shared trip and lecture Ariely on social media and in their newsletter
  - VUmc (academic medical center) advertised the lecture on their website
  - We produced two vlogs with Dan Ariely one on his lecture and one on M-TIBA

DATA

### REPORTS

- Report Joep Lange Institute inaugural event (March 15th 2016)
- Report workshop Home-based Hypertension Management (ahti)
- Report workshop by Dan Ariely (Nov. 9th 2016)
- Lecture Dr. Jim Yong Kim video & transcription
- Lecture Professor Dan Ariely video & transcription

### REACH

- Apart from the 150 guests at the Jim Kim lecture. The webcast was watched +/- 1500 times
- World Bank shared the Jim Kim lecture on their channels as well
- Social media: in total 365 messages were posted on the Jim Kim event (retweets, own tweets Jim Kim) reaching over 2 million people. We were trending in the Netherlands
- In addition to the 300 guests at the Dan Ariely lecture, the webcast has been watched +/- 1000 times in several countries, incl. United States, Canada, United Kingdom, Germany and Kenya.
- In general, our followers grew to 400 followers on Twitter and 164 followers on LinkedIn.

DEMONSTRATE

ESCAPE

SCIENCE

INSTITUTION

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MOVE