The World Bank Invests in Ending AIDS
The TREAT Asia Report Interview: Dr. Jim Kim

Dr. Jim Kim was appointed president of the World Bank Group in July 2012. Since 1989, the World Bank has provided nearly $4.6 billion to support multi-sectoral HIV/AIDS responses in low- and middle-income countries. In 1987, Dr. Kim co-founded Partners In Health, which now provides healthcare to low-resource communities on four continents. As director of the World Health Organization’s HIV/AIDS Department from 2004 to 2006, he led the ‘3x5’ initiative, the first ever global goal for HIV treatment, which aimed to provide antiretroviral treatment to three million people in developing countries by 2005. Dr. Kim served as president of Dartmouth University from 2009 to 2012. Among many accolades, he received a MacArthur “Genius” Fellowship in 2003.

TA Report: How has your background in public health shaped your approach to addressing the epidemic as president of the World Bank Group?

Dr. Jim Kim: Earlier this year, I announced two global goals for the World Bank Group: to end poverty by 2030 and boost shared prosperity for the poorest 40% of the population in every developing country. These are ambitious goals. But my work on the ‘3x5’ initiative at the World Health Organization (WHO) convinced me that setting ambitious targets drives change. I also saw daily how HIV implementers were generating innovative solutions to seemingly intractable problems—from supply chain

Supporting the Psychosocial Needs of HIV-Positive Children and Adolescents

Children and adolescents living with HIV face a host of complicated health and social issues, including coping with their diagnosis and sharing it with others. In Asia, poverty and HIV-related stigma often prevent HIV-positive youth from accessing the healthcare and social support they need and from staying in school, both of which limit their options for the future. In 2010, only 39% of the 180,000 HIV-positive children and adolescents in Asia in need of antiretroviral treatment were receiving it.

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Looking Back over Ten Years of Epidemiologic Research

At TREAT Asia’s first network meeting in 2001, there was no way to gather regional-level clinical data on HIV patient outcomes in the Asia-Pacific. Filling that gap was a key goal for the network, and would become the foundation of our research program. We can now look back and see the impact of 10 years of the TREAT Asia HIV Observational Database, which was the first and remains the only regional cohort studying long-term HIV treatment outcomes (see page 4).

Since that time, TREAT Asia has grown into a program that is making 150 grants this year to support 60 institutions in conducting over 20 research studies, educational trainings, and social support activities (see page 1) in 14 countries. Our long-term model of working directly with local clinicians and investigators continues to build capacity within countries and ensure greater sustainability of their programs.

As World Bank Director Dr. Jim Kim notes (see page 1), clinical, epidemiologic, and economic research can be strategically used to reduce new infections, improve the quality of HIV care, and increase the efficiency of national program spending. The past decade has brought multiple breakthroughs in combating the global epidemic in all these research areas. Today, our primary challenge is to figure out how to best capitalize on our collective investments in order to achieve the greatest impact.

Annette H. Sohn, M.D.

SUPPORTING PSYCHOSOCIAL NEEDS

In August, TREAT Asia—with the help of a generous donation from an anonymous donor—issued a third round of Social Support Awards to bolster the efforts of four organizations in its pediatric network to improve psychosocial support for HIV-positive young people, keep them in school, and ensure they get age-appropriate medical treatment.

“Adolescence is a transitional period full of critical decisions and turning points,” says Pornsuda Nipathakosol, project manager of the TREAT Asia pediatric program. “These programs will greatly benefit the adolescents’ ability to engage in and adhere to their medical treatment, and to grow through appropriate developmental stages alongside their peers.”

The four organizations are: HIV-NAT/Thai Red Cross AIDS Research Centre in Bangkok and Chiangrai Prachanukroh Hospital in Chiang Rai, Thailand; the National Pediatric Hospital in Phnom Penh, Cambodia; and Worldwide Orphans (WWO) in Ho Chi Minh City, Vietnam. They will use the awards, ranging from $7,500 to $15,000, to support the training of healthcare providers, young people, and their families to improve how children are told they have HIV (a process called disclosure), and to help older adolescents transition into adult care.

“It is critical that children continue to receive support after disclosure,” says Ngo Thuy, country director of WWO. “The support mitigates the shock, fear, and distress of the children and their guardians, so they can build up resilience and perseverance together.”
Cytomegalovirus Retinitis – A Neglected Disease of Resource-Limited Settings

Cytomegalovirus (CMV) retinitis once affected up to one-third of HIV-positive people, causing vision loss and even blindness, but it has been nearly eliminated in patients with access to antiretroviral therapy (ART). However, it remains prevalent in resource-limited settings due to the high cost of treatment (see page 8) and a lack of trained ophthalmologists who can diagnose the condition.

CMV is a common virus that most people around the world are infected with by the time they are adults. The infection is usually controlled by the immune system and causes no serious consequences. But it can “reactivate” in HIV-positive people with severely impaired immune systems, causing inflammation of the retina, or retinitis. The disease can be effectively treated with antiviral medications, including oral valganciclovir, and by strengthening HIV-positive patients’ immune systems through ART.

A recent systematic review of research on CMV retinitis in resource-limited settings analyzed 65 studies, including data on 20,280 HIV-positive patients from 24 countries in Asia, Africa, and Latin America. The prevalence of CMV retinitis among those screened for the disease ranged from 0.2% in a Nigerian study to 71.5% in one performed in Thailand. The overall prevalence was highest in Asia (14%) and lowest in Africa (2.2%). By country, the highest rates were 24.8% in Myanmar (5 studies, 2,928 patients), 24.4% in Thailand (5 studies, 1,397 patients), 15.2% in China (9 studies, 2,357 patients), and 6.8% in India (13 studies, 4,305 patients).

The analysis confirmed a known association between CMV retinitis and low CD4 levels, as 73.4% of the patients had CD4 counts <50 cells/mm³, 15.6% had CD4 between 50 and 100 cells/mm³, and 8.3% had CD4 between 100 and 200 cells/mm³. Despite the expansion of ART over the last decade, the prevalence of CMV retinitis did not significantly change over time, and actually increased from 11.8% in the period 1993–2002 to 17.6% between 2009 and 2013.

These findings provide a global perspective on the persistent burden of CMV retinitis in HIV-infected patients in resource-limited settings, raising concerns about the lack of CMV retinitis screening programs targeting these patients, and emphasizing the importance of addressing barriers to treatment access.

TAHOD Turns Ten

In 2003, The TREAT Asia HIV Observational Database (TAHOD) became the first study to collect treatment data from clinical sites throughout the Asia-Pacific region. In the early 2000s, access to antiretroviral therapy (ART) began rapidly expanding in developing countries across the Asia-Pacific region. However, at the time very little information existed about patients taking ART in Asia—a region that is home to more than 60% of the world’s population and nearly five million HIV-positive people. Asia has different HIV risk groups and prevalent viral subtypes than other regions. Additionally, Asian populations differ genetically and physiologically from other populations, and the region has high rates of HIV co-infection with hepatitis B and C and tuberculosis. All of which prompted many unanswered questions about how best to treat HIV.

“At that time, there were some real concerns that ART outcomes could be considerably different than in treated populations in developed countries,” says Matthew Law, Ph.D., head of the Biostatistics and Databases Program at the Kirby Institute for infection and immunity in society at the University of New South Wales, Australia, which serves as the data management and biostatistics center for TAHOD.

In September 2003, TAHOD was able to further expand the scope of its research when the U.S. National Institute of Allergy and Infectious Diseases (NIAMD) selected TREAT Asia and Principal Investigator David Cooper, M.D., Director of the Kirby Institute, to lead the Asia-Pacific component of the International Epidemiologic Databases to Evaluate AIDS (IeDEA) consortium. This included an initial five-year grant of $6.1 million, which was later renewed until 2016. TREAT Asia now contributes its data to global analyses of the HIV epidemic conducted in partnership with IeDEA.

Over the last 10 years, network investigators have published almost 40 analyses of TAHOD data in peer-reviewed medical journals, creating a unique evidence base to support our understanding of regional HIV trends. Collaborations through IeDEA multi-regional analyses have a similar impact on global HIV epidemiology. For example, a paper accepted for publication in the Journal of Acquired Immune Deficiency Syndromes will report that while the average CD4 count of patients starting HIV therapy in developing countries increased over the previous decade, it remained below 200 cells/mm³, a threshold associated with severe immune suppression. Even with the recent scale-up of treatment access, patients in these regions are still not initiating treatment until after their disease has already progressed.

After 10 years of epidemiologic research, many important questions remain unanswered. “We’re only 10 years into effective HIV treatment in developing countries in Asia, and less than 20 worldwide, and the full scope of the longer-term impact of ART remains unknown,” says Law. “Also, developing countries don’t have the same range of ART options as developed countries. As growing numbers of people fail first- and second-line regimens, it will be even more important to monitor patient outcomes through programs like TAHOD.”
Those still in follow-up and on treatment had been taking ART for a median of six years, and 85% were still on their first-line regimens. Their most recent median CD4 cell count was 657 cells/mm$^3$, and of the adolescents with an HIV viral load test, 86% had suppressed virus levels of <400 copies/ml. Among those still being cared for in TREAT Asia network clinical centers, 73% had lost one or both parents, 62% knew about their own HIV status, and 93% were attending school.

Of the 33 adolescents who died during the time period covered in the study, the median age at death was 15 years, and 31 (94%) were receiving ART at the time of their death. Forty-five percent were reported to have died due to opportunistic infections and 27% due to noninfectious AIDS-related conditions such as renal failure.

Compared to those who died, adolescents who remained in follow-up started their HIV treatment at younger ages and at higher median CD4 percentages (7% vs. 3%). In addition, adolescents who had CD4 levels <200 cells/mm$^3$ at age 12 were about 17 times more likely to die than those who had levels ≥500 cells/mm$^3$.

The researchers concluded that starting treatment earlier and maintaining higher CD4 levels throughout childhood lowered the risk of death among those who survived to adolescence. This study demonstrates that our ability to successfully initiate treatment in children with HIV today directly impacts their future as they age into adolescence and adulthood.

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management to creative use of human resources to including voices from the community in evaluating programs.

To realize a world free of AIDS and a world free of poverty, I believe we must infuse that same appetite for innovation and action. We must invest in strong health systems and advance the science of delivery, translating the evidence on what works and what doesn’t in tackling HIV into cost-effective policies and programs that can operate at scale and produce measurable impact on people’s lives.

**TA Report**: How is the World Bank Group working to implement evidence-based strategies in the context of HIV/AIDS?

**Dr. Kim**: In Eastern and Southern Africa, for example, the World Bank Group is working with partners to promote male circumcision, which has proven effective in curbing the spread of HIV. Bank Group support has also played a pivotal role in turning the tide on the epidemic in India. An independent impact evaluation of the India AIDS program concluded that it will have prevented 60% of the expected number of HIV infections by 2015, primarily through targeted behavioral interventions for sex workers and their clients.

We also have some promising evidence that empowering adolescent girls and their families can have substantial effects on their sexual and reproductive health, helping them access education, delay marriage, increase self-esteem, practice safe sex, and find good jobs. Recent Bank Group studies tested the use of conditional cash transfers in Tanzania and Malawi as a tool to reduce the risk of HIV or other sexually transmitted infections, and both studies suggest that financial incentives could be an effective tool. In Tanzania, participants showed a 27% reduction in the incidence of STIs after one year. In Malawi, adolescent girls showed a two-thirds reduction in the risk of HIV infection.

**TA Report**: Last year, the Obama Administration released its President’s Emergency Plan for AIDS Relief (PEPFAR) Blueprint identifying core priorities for accelerating progress on HIV/AIDS. How is the World Bank Group partnering with PEPFAR to bring to scale evidence-based programs including HIV treatment and prevention for children and adults?

**Dr. Kim**: Through PEPFAR, U.S. leadership has been, and remains, pivotal to the global fight against AIDS. The PEPFAR Blueprint is a major step forward in realizing our shared vision of a world free of AIDS and poverty. In support of the Blueprint, the World Bank Group is now working with PEPFAR to help countries scale up the most effective and efficient AIDS interventions and build the strong health systems required for sustainable AIDS prevention, treatment, and care. This support includes increasing collaboration on country health programming and improving indicators and tools to measure program impact.

**TA Report**: How does the World Bank Group tailor its funding approaches to ensure they fit the circumstances of individual countries?

**Dr. Kim**: World Bank Group financing is country-driven. We provide financing in response to government demand and in support of a country’s own development strategy. Our funding modalities vary by country and project and can include loans, grants, results-based financing, and more. Bank Group support to address HIV is increasingly provided through broader projects in health or other sectors, where we and our country partners determine that an HIV component can add critical value to the project’s overall impact. Perhaps most importantly, the Bank Group provides analytical support to help countries sharpen their HIV strategies, and get more value for their money. This support can be especially important where HIV funding is tight and countries are striving towards an AIDS-free generation.

**TA Report**: The World Bank Group has issued multiple reports urging governments to improve their HIV programs for key populations including sex workers, MSM, and injecting drug users. However, funding for programs targeting them remains low in many places, especially in countries where one or all three populations are criminalized. How does the World Bank Group funding model work to address these key populations despite those challenges?
Dr. Kim: The evidence is clear that focusing on the most at-risk populations is critical to ending the epidemic. In many countries, sex workers, people who inject drugs, and men who have sex with men remain marginalized in society and are at a significantly higher risk of HIV infection than other groups in low- and middle-income countries. Even in countries with epidemic-level HIV rates in the general population, these groups are disproportionately affected. Targeted interventions not only protect members of these marginalized communities, but also make a major contribution to averting a wider epidemic.

World Bank Group financing for HIV interventions in countries as disparate as India, Vietnam, Nigeria, Niger, and Brazil explicitly focuses on these key populations. For example, in Nigeria—where these key populations are estimated to contribute about 40% of new HIV infections—the Bank Group supported the Nigerian government in conducting local epidemic appraisals that have improved understanding on the nature of sex work and other epidemic drivers, and how to best formulate local programs to address them. The emerging evidence led the government to scale up its HIV prevention program and prioritize these target populations and specific geographical areas most at risk.

TA Report: A World Bank Group report states that HIV programs targeting and empowering sex workers in India have averted three million new infections since 1995. How is the World Bank Group utilizing these findings in its work in other countries in the Asia and Pacific region and around the world?

Dr. Kim: Since its launch of the National AIDS Control Program in 1991, India has worked in close partnership with the World Bank Group and other development partners to focus on prevention among vulnerable populations at highest risk of contracting HIV. More than $640 million in Bank Group financing has helped to create the institutional framework of India’s HIV response at national and state levels. The Bank Group has also financed, through pooled funding with the Indian government and other partners, more than 1,300 targeted HIV prevention interventions for those most at risk, reaching more than 70% of female sex workers and increasing the use of condoms. We estimate that three million HIV infections are being averted by this strategic approach from 1995–2015—demonstrating the cost-effectiveness of these targeted HIV prevention interventions for female sex workers.

The India experience offers very useful lessons for other countries even in different epidemic settings. It demonstrates the huge benefits from having a well-planned and targeted HIV prevention program and the population-level effectiveness of such an approach. Our package of support for Nigeria’s national HIV plan is informed by the India experience. We also are supporting the Indian Government to develop its own South-South learning initiative to share the lessons of India’s successful AIDS response with other countries.

TA Report: In multiple countries in Asia, the HIV rate in injection drug users is over 20%, but harm reduction programs, including syringe exchanges, remain scarce. How can the World Bank Group use its influence to persuade governments to establish effective harm reduction programs?

Dr. Kim: We are conducting numerous economic and policy studies to inform evidence-based policies. For example, we are working with the government of Malaysia to evaluate community-based alternatives to compulsory detention. Initial findings suggest far lower rates of relapse in voluntary, community-based treatment.

TA Report: How is the World Bank Group working to include and fund civil society in its efforts to address HIV/AIDS?

Dr. Kim: Community organizations have been on the front lines of responding to the epidemic. Of the first $1 billion the Bank Group contributed to the global AIDS response, nearly 40% went to community organizations for grassroots actions to reduce stigma, change behaviors and social norms to prevent infection, and care for people and orphans affected by HIV. Overall, the Bank has provided support to some 50,000 community-based organizations in more than 50 countries to address HIV and AIDS. The Bank Group also collaborated with civil society organizations and with the U.K. Government on a multi-country study that demonstrated the effectiveness of community responses to HIV/AIDS in 2012. If we are to sustain progress,
In August, the pharmaceutical company Roche signed an agreement to enter the patent for valganciclovir (Valcyte®) into the Medicines Patent Pool (MPP). This could lead to a reduction in the price of the oral tablet to treat CMV—an infection that can cause blindness in HIV-positive people if left untreated (see page 3)—by up to 90% in 138 low- and middle-income countries. The United Nations-backed MPP was launched in 2010, using UNITAID financing. When pharmaceutical companies enter their patented HIV-related medicines into the “pool,” they are agreeing to allow the MPP to issue low-cost licenses to individual generic manufacturers to produce the medicines. This allows the production and sale of cheaper versions of drugs in developing countries before the patent on them runs out. 

“The agreement will make oral treatment for CMV available at lower prices to help break a cycle of lack of screening and treatment in many countries,” said Greg Perry, executive director of the MPP. Currently, four months of Valcyte costs approximately $6,000 in developing countries, a prohibitive price tag. CMV can also be treated through a series of cheaper eye injections, but these must be administered by highly trained staff and are not available in many areas. In Asia, 14% of HIV-positive people have been infected with CMV, the world’s highest prevalence rate.

Previously, the MPP struck similar deals with pharmaceutical companies Gilead and ViiV Healthcare.