

TREAT ASIA REPORT

Rebooting the Response to AIDS in the Asia-Pacific

The *TREAT Asia Report* Interview: J.V.R. Prasada Rao



UN Special Envoy for AIDS in the Asia-Pacific J.V.R. Prasada Rao

J.V.R. Prasada Rao was appointed UN Secretary-General’s Special Envoy for AIDS in Asia and the Pacific in May 2012. Formerly director of India’s National AIDS Control Organization and secretary for Health and Family Welfare, he has been a leader in India’s response to AIDS for 15 years. The TREAT Asia Report first spoke to Mr. Rao in 2007 when he was director of the UNAIDS Regional Support Team for AIDS in Asia and the Pacific. In this interview, he discusses the progress made over the past five years and the challenges that remain.

TREAT Asia Report: In May you were appointed as the UN Secretary-General’s Special Envoy for AIDS in Asia and the Pacific. What do you hope to achieve in this position?

J.V.R. Prasada Rao: The Secretary-General made a rare gesture announcing my appointment from Mumbai in India, which means a lot to me. In that speech he expressed the hope that I will work hard with countries to create an AIDS-free generation in the Asia-Pacific region. Doing so is therefore my long-term goal.

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HIV Cure Research Gains Momentum

HIV cure research is rapidly advancing on several fronts and for the first time was the subject of a two-day symposium preceding the International AIDS Conference (see page 2). In 2012, amfAR awarded US\$2.3 million in cure-focused research grants, including US\$1.3 million to five teams working within the amfAR Research Consortium on HIV Eradication (ARCHE).

One of the teams is led by Dr. Timothy Henrich of Brigham and Women’s Hospital in Boston. Following stem-cell transplants to treat cancer, two of Dr. Henrich’s HIV-positive patients now show no sign of HIV in their bodies by standard laboratory tests. Dr. Henrich plans to withdraw these patients from their antiretroviral therapy (ART) under controlled conditions to determine whether they have indeed been cured of HIV.

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Photo: Kevin Tachman

amfAR CEO Kevin Robert Frost and Dr. Jintanat Ananworanich of the Thai Red Cross AIDS Research Centre

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The information in the *TREAT Asia Report* is compiled from a variety of sources and may contain controversial views and opinions not endorsed by amfAR. Material in the *Report* should not be used as the basis for medical diagnosis or treatment.

This newsletter is also online at www.treatasia.org.

TREAT Asia Report

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MAKING AIDS HISTORY

Still Struggling to Implement the Science



Although policymakers have been saying that we know what works to slow down or even reverse the HIV epidemic, the world still struggles with implementation of these interventions.

We know stavudine has such a bad side-effect profile that it is rarely used in high-income countries—but we use it anyway in low- and middle-income countries because it is the cheapest antiretroviral available. We know that treating people with HIV before their immune system deteriorates can help them to live longer and prevents further spread of the disease (see page 8)—but we cannot get people tested early enough to catch

them before this happens. We have both epidemiologic and cost-effectiveness research that demonstrates the value of giving clean needles and syringes to people who inject drugs (see page 4)—but we hesitate out of unsubstantiated fears that this will lead to even more injecting drug use.

Without the next step that translates research into higher-quality clinical practice and evidence-based policy, the science lacks impact. As noted by UN Special Envoy Prasad Rao (see page 7), we need ambitious targets in order to generate political will and secure financial commitments. Since we already have the data that identify those targets, it is now a question of whether the other components will fall into place.

Annette Sohn, M.D.

AIDS Takes Center Stage in Washington, D.C.

Nearly 24,000 people from 183 countries came together for the 19th International AIDS Conference in Washington, D.C., 22–27 July, the first to be held in the U.S. in 22 years.

amfAR and TREAT Asia were well represented at the conference, beginning with a 21 July gala dinner titled *Together to End AIDS*, honoring Bill Gates for his visionary leadership on global health and HIV/AIDS. amfAR's Award of Courage was presented to Mr. Gates by the Foundation's global fundraising chairman, Sharon Stone.

In addition to activities during the main conference, TREAT Asia staff and network investigators participated in pre-conference workshops on HIV pediatric and cure research. Two studies on risk behaviors and treatment outcomes of adolescents from TREAT Asia's pediatric HIV network were presented.

The next International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention will take place in Kuala Lumpur, Malaysia, 30 June–3 July, 2013, and the next International AIDS Conference will take place in Melbourne, Australia, 20–25 July, 2014. ■

Effecting Change: Service Organizations as Community Advocates

For the past five years, amfAR has been serving the HIV-related needs of gay men, other men who have sex with men (MSM), and transgender individuals (collectively referred to as “GMT”) throughout the developing world through its MSM Initiative, which was recently renamed The GMT Initiative.

With the change in name—meant to better reflect the enormous diversity of those served by the program—came a strategic shift in focus toward advocacy as an essential means of effecting real and lasting progress. “The change is about being more targeted in our grant-making to have a broader impact,” said Kent Klindera, director of the GMT Initiative.

A project called Advocacy and Action, funded by the Levi Strauss Foundation, was a forerunner of this shift in focus. Coordinated by both the GMT Initiative and TREAT Asia, it was designed to build the capacity of community-based organizations in Asia to advocate more effectively for improved access to HIV prevention, treatment, care, and support services for GMT individuals. The project takes a creative hands-on approach and combines on-site training and practical experience through tasking organizations with developing and implementing an advocacy project tailored to their needs and aspirations.



One of the first Advocacy and Action award recipients, Chengdu Love & Kindness Group, formed in May 2007 by HIV-positive MSM in Chengdu, China, is a service organization working to improve the well-being and quality of life of HIV-positive MSM. “Service groups are the best advocates that a community has,” says Klindera. “They know the needs of the people and the community better than anyone else.”

Chengdu Love & Kindness Group determined through qualitative research that the biggest issues facing people living with HIV/AIDS (PLWHA) in their community were the inconsistency in the costs associated with undergoing routine

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CURE RESEARCH CONTINUED FROM PAGE 1

Another grant was awarded to a team led by Dr. Deborah Persaud of Johns Hopkins University in collaboration with Dr. Katherine Luzuriaga of the University of Massachusetts. They hope to determine if it is possible to cure HIV infection with ART alone in children in whom ART had been started soon after birth and continued for an average of 15 years. At a think tank initiated by TREAT Asia and organized by amfAR in June, Dr. Persaud had reported on a group of five such children with no detectable HIV

and who remain HIV antibody-negative. With amfAR support, Drs. Persaud and Luzuriaga will use highly sophisticated tests to search for active and latent virus in their patients.

To explore whether starting ART during acute infection could lead to a functional cure in adults, the Thai Red Cross AIDS Research Centre and the U.S. Military HIV Research Program are collaborating on a study in Thailand. The study’s 75 participants, mainly young men who have sex with men

(MSM), will remain on either three- or five-drug combination ART for three to four years.

“Because these people were identified so early, and got on treatment so fast, the reservoir size of HIV in their bodies is extremely low—lower than any studies that have been published to date,” said Dr. Jintanat Ananworanich, the Thai collaborator for the U.S. Army on this study and a principal investigator within the TREAT Asia network. “They also have preserved immunity, and have the highest chance of achieving a functional cure.” ■

Investing in Syringe Exchange Results in Future Cost Savings

Harm reduction approaches for those who inject drugs, including the distribution of clean needles and syringes, are proven interventions to prevent transmission of HIV and other blood-borne viruses, and are recommended by the World Health Organization (WHO) and other leading public health agencies.

Recent studies in the U.S. and China have demonstrated that investments in syringe exchange programs (SEPs) are cost-saving HIV prevention interventions.

During the 19th International AIDS Conference in July 2012, researchers

reported that increasing SEP coverage in the U.S. from the existing 2.9 percent to 5 percent would avert 169 HIV infections.¹ Although this would require US\$19 million of additional investment, it would save US\$66 million in future treatment costs. Greater program coverage was associated with even greater savings over time (see chart).

A study in China² estimated that between 2002 and 2008, the SEP in Yunnan province averted approximately 16–20 percent (5,200–7,500) of new HIV infections. With total spending of US\$1.04 million on the program during that time period, researchers estimated

that it saved between US\$1.38 and US\$1.97 million in care and treatment costs averted.

The findings of major returns on SEP investments are lessons for all Asian countries, where 4.5 million of the estimated 15.9 million people who inject drugs live.³ Although injecting drug use is a key driver of the regional HIV epidemic, SEP coverage has been inconsistent. Delays in SEP scale-up are resulting in lost opportunities to prevent new infections and capitalize on cost savings for national HIV programs struggling with shrinking budgets. ■

1. Nguyen TQ, Weir BW, Pinkerton SD, Des Jarlais DC, Holtgrave D. Increasing investment in syringe exchange is cost saving HIV prevention: modeling hypothetical syringe coverage levels in the United States, 19th International AIDS Conference, Washington DC, Abstract MOAE0204.
2. Zhang L, Yap L, Xun Z, Wu Z, Wilson DP. Needle and syringe programs in Yunnan, China yield health and financial return, *BMC Public Health* 2011 11:250.
3. Harm Reduction International. *The Global State of Harm Reduction 2012: Towards an integrated response*, http://www.ihra.net/files/2012/07/24/GlobalState2012_Web.pdf, Accessed 19 August 2012.

Using Mobile Phone Technology to Improve Treatment Adherence in India

Half of the world's 6 billion mobile phone and device subscriptions are in the Asia-Pacific region. Mobile technology has occasionally been used as part of HIV care to improve clinic attendance and adherence, but has

rarely been implemented as a standard of care. Investigators in Bangalore, India, conducted a study to explore how regular interactive voice response (IVR) calls and short message services (SMS) impacted adherence to first-line antiretroviral therapy (ART) at a private, nonprofit clinic.¹

Recipients of IVR calls heard an automated message asking them to respond to a single question about their adherence using the keypad on their mobile device, and the SMS was a representation of a lamp. Both reminders were sent once a week for six months, and patient adherence was assessed by counting antiretroviral pills at clinic visits. The study continued until six months

after the mobile phone reminders were stopped. Adequate adherence was defined as taking >95 percent of ART medicines over one month.

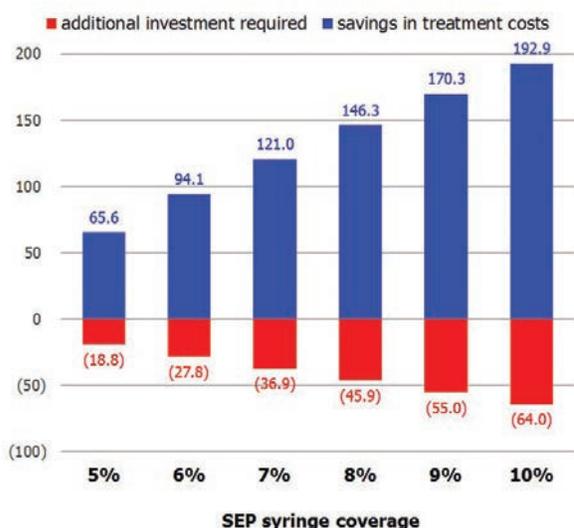
Of the 150 patients who started the study, 141 had complete data that were analyzed. Adequate adherence significantly improved from 85 percent at the beginning of the study to 94 percent at the end of the first month, and remained high at 91 percent at month six and 94 percent at month 12 ($p=0.016$). Although 17 percent of participants reported that forgetfulness was a barrier to adherence at the beginning of the study, this fell to three percent by month six ($p<0.001$).

Surveyed at month 12, study participants reported that the IVR system was easy to use and somewhat more helpful than the SMS ($p<0.001$):



Photo: © Komar | Dreamstime.com

Additional investment required per year & savings in HIV treatment costs (million 2011 USD) for each SEP syringe coverage level



Used with permission from Nguyen TQ, et al.

34 percent preferred only the IVR, 11 percent only the SMS, 44 percent liked having both at the same time, and 11 percent did not have a preference. Only 16 percent reported that they would “feel ashamed” if another person used their phone and received the IVR or the SMS.

Overall, the study participants were comfortable receiving and using the mobile phone interventions, which led to significant improvements in adherence and reductions in forgetfulness. The study added to the scientific evidence confirming that mobile phones can be used as tools to promote adherence, delaying treatment failure and the need for second-line ART regimens. ■

1. Rodrigues R, Shet A, Antony J, Sidney K, Arumugam K, Krishnamurthy S, D'Souza G, Decosta A. Supporting adherence to antiretroviral therapy with mobile phone reminders: results from a cohort in South India. *PLoS One*. 2012;7(8):e40723. Epub 2012 Aug 27.

Hepatitis B and HIV-Infected Adolescents: Time to Test and Revaccinate

More than 240 million people worldwide are chronically infected with hepatitis B virus and about 600,000 people die each year as a consequence. A highly effective three-dose series of hepatitis B vaccine has been available since 1982, and is safe for HIV-infected children and adolescents. However, immune suppression resulting from HIV infection can reduce the protective antibody response to hepatitis B vaccination.

Recently, Thai investigators evaluated the prevalence of hepatitis B infection in 521 perinatally HIV-infected adolescents between 12 and 25 years of age as part of a TREAT Asia-supported study.¹ The study was conducted at four TREAT Asia pediatric network sites in Thailand.

The average CD4 cell count among the adolescents taking part in the study was 685 cells/mm³. Among the 81 percent of adolescents taking part in the study who had viral load testing, 86 percent had HIV viral loads less than 400 copies/mL. Although 54 percent had a reported history of hepatitis B vaccination during childhood, only 14 percent were revaccinated after immune recovery following antiretroviral therapy (i.e., after their CD4 cell counts returned to normal levels). The investigators then found that only 18 percent tested positive for protective antibodies against hepatitis B—whether from being vaccinated or as a result of a previous infection. Those with protective antibodies were older, had a higher CD4 cell count, and were more likely to have had a history of hepatitis B vaccination. Although the overall prevalence of HIV-hepatitis B co-infection was low at 3.3 percent, 69 percent of co-infected children had elevated levels of hepatitis B in their blood, and 75 percent were already resistant to one of the medicines that can be used to treat both infections (i.e., lamivudine, or 3TC).

HIV-infected adolescents who have never been vaccinated or have no evidence of antibody protection on blood testing should undergo immunization with a full three-dose series. Although this approach is standard in the U.S. and some other high-income countries, it is not in most Asian countries. Vaccination programs that are usually focused on infants need to create mechanisms for older children and adolescents with HIV to be tested for hepatitis B and vaccinated or revaccinated following immune recovery. Failure to do so is leaving thousands of HIV-positive Asian adolescents at risk of becoming co-infected with hepatitis B and developing serious liver disease. ■



Photo: Kevin Tachman

1. Aurrpibul L, Lumbiganon P, Kolasaraksa P, Hansudewechakul R, Sa-Nguanmoo P, Taeprasert P, Bunupuradah T, Pooworawan Y, Sirisanthana V, Puthanakit T. HIV and Hepatitis B Co-infection among Perinatally HIV-infected Thai Adolescents. *Pediatric Infectious Diseases Journal*. 2012 May 15.

We need to begin by achieving an AIDS-free ‘next generation,’ which essentially means eliminating new HIV infections among newborn babies by 2015. The second step, which is more difficult to achieve but definitely feasible, is to also eliminate new infections among young adults.

Treatment as prevention, new technologies for prevention, and improvement of the legal environment for HIV-positive people and other vulnerable populations are three of the pillars for bringing this to fruition. The fourth pillar is a vaccine or a cure, which will really change the rules of the game.

TA Report: As a region, Asia has lower rates of antiretroviral coverage to prevent mother-to-child HIV transmission (PMTCT) than Sub-Saharan Africa. What is being done to improve coverage?

Rao: This is one of the failures of the AIDS program in this region. In India, the national program has to accelerate its efforts toward better coverage of pregnant mothers with PMTCT services, and should take advantage of the presence of a large National Rural Health Mission (NRHM) functioning in the country. The National AIDS Control Organization (NACO) and NRHM have to coordinate better to integrate PMTCT services with general health systems in a phased manner.

India and other Asian countries should also switch immediately to the multidrug regimen advocated by WHO and discontinue single-drug treatment with nevirapine without further delay. UNAIDS launched an intensified global plan along with WHO to eliminate new infections among children by 2015, and India is the only country from Asia in that list. Hopefully this will help India to do better in coming years.

TA Report: When we spoke with you in 2007, prevention programs in Asia were struggling to reach 80 percent of target populations—injecting drug users (IDUs), men who have sex with men (MSM), and sex workers. What progress has been made over the past five years?

Rao: There has been impressive progress in prevention programs for sex workers and their clients in many countries in Asia. Coverage levels reached 60 to 70 percent in countries like India, Nepal, and Bangladesh in South Asia and Thailand, Cambodia, and Laos in Southeast Asia. As a result, new infections among these populations started steadily declining.

However, the situation has not altered materially for IDUs and MSM in many Asian countries. There has been impressive



Left to right: UNAIDS Executive Director Michel Sidibé, his predecessor Dr. Peter Piot (now director of the London School of Hygiene & Tropical Medicine), and J.V.R. Prasada Rao

scale-up of opioid substitution therapy (OST) for heroin users and needle and syringe programs (NSPs) in China, Vietnam, Malaysia, and Indonesia, which have large IDU populations. But this scale-up has not been matched by the creation of a more friendly and humane legal environment surrounding drug use. Laws governing drug use and same-sex relations continue to be harsh.

Asian countries with concentrated epidemics aiming to achieve the MDG (Millennium Development Goals) target of reducing new infections by half must intensify their efforts to reach out to vulnerable populations and create a friendly legal environment to create better access to services.

TA Report: The last time we spoke, you said that political will and resources were the two key components to scaling up prevention coverage. How has this changed over the last five years?

Rao: These two continue to be key components, and even more so now. The diminishing availability of resources from traditional donors is a matter of serious concern that countries should take notice of. Political will to commit even more domestic resources to AIDS programs will be an important determinant in the success of the AIDS response in many countries, including emerging economies like China and India. In addition, we need to emphasize the need for legal reforms by way of repeal or amendment of laws criminalizing vulnerable populations and people living with HIV. These laws are a major impediment to getting prevention and treatment services to people in need of them.

TA Report: In 2009 India decriminalized homosexuality. What impact has this had on treatment and prevention programs targeting MSM in India?

Rao: Since the pronouncement of the judgment decriminalizing homosexuality, there has been a marked increase of coverage of prevention and treatment programs for MSM and transgender individuals. These groups could organize themselves as communities much more effectively to avail services under the national program. I do hope that the next phase of the national AIDS control program (NACP IV) will prioritize preventive interventions among MSM and transgender communities in India.

TA Report: The rate of new HIV infections in India decreased by more than 50 percent between 2000 and 2009. What factors have contributed to this decrease?

Rao: India recognized the need to build an evidence-based program for AIDS prevention right from 1992, when the first phase of the national program was launched. The evidence clearly showed where the infections were occurring—among sex workers and their clients, injecting drug users, MSM, and transgender youth. Prevention interventions with a comprehensive package of services received priority right from 1999 when the second phase of the national program was launched.

A national surveillance system was made operational, and it monitors the epidemic so that we can carry out midcourse corrections wherever needed. The treatment program for adults and children that started in 2003 was scaled up substantially to reach about 50 percent of targeted populations.



Photo: United Nations

J.V.R. Prasada Rao with UN Secretary-General Ban Ki-moon in Mumbai, India

Overall there has been tremendous political support and excellent leadership for the program in the last 20 years. The cumulative effect of all of this is the reduction of new infections to 56 percent of the 2001 level, which sets India on course to achieve the MDG 6A target—to halt and begin to reverse the spread of HIV/AIDS by 2015.

TA Report: What strategies to reduce the cost of second-line therapies have been successfully implemented? Are there other steps that countries can take using current or proposed intellectual property flexibilities?

Rao: India, which produces and supplies the bulk of the generic drugs for developing countries in Asia and Africa, has been successful in bringing a number of second-line drugs into production, enabling countries to import them at a lower cost than the proprietary drugs from multinationals.

The real challenge is for third-line drugs, which are mostly under patents. If countries do not use the flexibilities provided under the TRIPS Agreement boldly by resorting to compulsory licensing or parallel importing of third-line ARV drugs, they will face a serious crisis in scaling up treatment programs in the next few years. India should take the lead in bringing some of the third-line ARVs under compulsory licensing, taking advantage of its patent law, which is one of the best in the world.

TA Report: The UNAIDS Getting to Zero campaign sets ambitious goals for 2015. How hopeful are you about achieving these goals?

Rao: The goals set under the UNAIDS Getting to Zero campaign are critical for creating an AIDS-free generation. Unless ambitious targets are kept, generating political will for commitment of resources, both domestic and external, becomes difficult.

Preventing new infections among children is very much an achievable target for 2015. So is prevention of deaths due to HIV/AIDS, if treatment programs the world over get increased resources to cover another 8 to 10 million people. The challenging part is the third zero, to eliminate stigma and discrimination. Achieving this will require a long and sustained fight by civil society groups and multilateral agencies.

But I am optimistic about the future and my work will be directed toward motivating country leadership to develop the vision of moving towards an AIDS-free generation in the Asia-Pacific region. ■

Implementing the “Test and Treat” Approach in Thailand



Photo: Yongyuth Wongwichai

Nurses and counselors from Lampang Hospital, Thailand, attended a test and treat workshop in June.

Proposed by the World Health Organization in 2009 as a possible means of controlling the global HIV epidemic, the “test and treat” approach recommends voluntary annual or more frequent testing for HIV and immediate antiretroviral therapy for anyone found to be HIV-positive. With support from Merck, TREAT Asia is organizing educational activities in advance of a “test and treat” pilot study with men who have sex with men (MSM) and transgender women (TG) being conducted by the Thai Red Cross AIDS Research Centre in three provinces in Thailand: Bangkok, Ubon Ratchathani, and Lampang.

Modeling experiments have shown that the “test and treat” strategy has the potential to lower HIV incidence by reducing community viral load—a population-based measure of HIV virus levels in HIV-positive individuals in a local community. The strategy was given further validation by the landmark clinical trial known as HPTN 052, which showed that people with HIV who start treatment before their immune systems are

moderately damaged are 96 percent less likely to transmit the virus to an uninfected partner.

As part of a community preparedness and consultation component leading up to the project, TREAT Asia held a forum in Bangkok in May 2012 to gauge MSM/TG community leaders’ interest in “test and treat” and discuss the potential benefits and limitations of the strategy.

Subsequent workshops at all three sites in June provided key partners with technical information and created an opportunity for exchanging ideas, addressing possible issues, and facilitating the engagement of community members in the study. Service provider attitudes toward MSM and TG were identified as a principal barrier to the uptake of HIV counseling and testing services among these communities. “Some providers have negative attitudes toward MSM and TG, and therefore they do not want to provide care to this group,” said Natchanon Srijan, coordinator of the Ubon Ratchathani Provincial Health Office. “As a result, some MSM and TG avoid returning to the clinics and pass this negative information on to their peers.”

To address this, two trainings on MSM and TG sensitivity and HIV counseling and testing are being conducted in October in Ubon Ratchathani and Lampang. The aim of the sessions is to build sensitivity and awareness of the sexual health needs of MSM and TG among nurses, pharmacists, medical technologists, and other staff who will be involved in the pilot study.

Results from the study will help to determine the acceptability of immediate treatment after diagnosis among MSM and TG, and may be used to inform future policy on the strategic use of “test and treat” in Thailand. ■

COMMUNITY ADVOCATES CONTINUED FROM PAGE 3

medical tests and the high overall costs of managing HIV-related illnesses. The group’s advocacy project aimed to remedy these issues, and succeeded in generating important changes for their community. PLWHAs in Chengdu are no longer required to pay a “threshold fee for

in-hospital treatment” and the costs of HIV-related tests are clearly itemized on posted lists, which help protect patients by ensuring that test fees remain constant between visits.

“Through this project, I have a new understanding of advocacy,” said Liu Peng

of Chengdu Love & Kindness Group. “In the past I knew nothing about methods and strategy, but now I know how to identify key problems, use a variety of targeted advocacy strategies to address them, and achieve desirable outcomes.” ■