

CONFERENCE REPORT

Updates on HIV treatment and prevention from Asia's HIV symposium: the 18th Bangkok International Symposium on HIV Medicine

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Consistent with HIV-NAT's mission, quality training is provided to many professional healthcare workers in the region by taking the latest knowledge from research and presenting it locally at the Bangkok International Symposium of HIV Medicine. The symposium is offered every third week of January for 3 days. Some of the plenary session content is presented below.

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Special lecture

• Second Professor Joep Lange & Jacqueline van Tongeren Memorial Lecture: cost-effective strategies to end AIDS

Debbie Birx (Coordinator of the United States Government Activities to Combat HIV/AIDS and US Special Representative for Global Health Diplomacy, USA) thanked Thailand for being the forefront of HIV research and being willing to take risks. For example, Thailand undertook to work on the RV144 vaccine study even though Nobel Laureates stated that there were little data to proceed [1]. She commended Thai scientists and politicians for looking at its epidemic with a critical eye, and allowing data to drive its science and programmatic responses in the most optimal way (e.g., 100% condom program, prevention of mother-to-child HIV transmission and HIV research collaboration models). Real-life experiences (data and models) from Thailand are now being used in Africa, with modifications to accommodate cultural and epidemic differences. However, she pointed out that there are some items that are hard to change in Africa, such as the frequency of

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- pre-exposure prophylaxis

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CD4 tests per year after the patient has started treatment, which is a significant financial barrier to scaling-up [2].

Prevention utilizing current technology

• Innovative information technology approaches in HIV

This nonmedical topic was addressed for the first time at the symposium because of its potential in public health programs in the country and region. Adam's Love is the leading internet and social media-based outreach organization in Thailand, specifically dedicated to the men who have sex with men (MSM) and the (transgender) TG communities. It provides online information and counseling on HIV, a clinic and research project in partnership with the TRCARC [3]. Cofounder Tarandeep Anand shared how surveys conducted by Adam's Love demonstrated that such services were reaching MSM with high levels of risk. For example, in one online survey, 46.25% did not use condom during last anal sex, 47.2% never tested for HIV and 40.1% have been exposed to HIV risk in the last month. Adam's Love is currently campaigning for the recruitment of participants in the PrEP-30 study. This implementation science study will compare three HIV outreach and care approaches – each targeting a different subset of the Adam's Love's website users. The aim is to find the best strategy to reach undiagnosed individuals in this key population: reaching out at community 'hotspots' in Thailand and referring to community-run clinics; testing and treatment provided entirely online; a hybrid of online outreach and offline clinic-based care. Adam's Love has expanded into Indonesia and Malaysia under the name of TemanTeman.org, and in Taiwan more recently, working with a hospital that provides HIV care, and the largest MSM sauna on the island. He concluded by emphasizing the 'need to be cared for' frequently expressed by young MSM/TG in a qualitative survey on e-health interventions, and that Internet of Things was no longer a 'future trend,' because 'it has already happened.'

Foreseeable HIV modalities

• Future of HIV treatment & care

David A Cooper (Kirby Institute, University of New South Wales, Australia) projected that we will continue to use non-nucleoside reverse-transcriptase inhibitors sparing regimens for the next 5 years in developed countries. Tenofovir alafenamide will likely play a central role because it has

fewer renal and bone side effects compared with tenofovir disoproxil fumarate (TDF) [4,5], and is to be given together with an integrase inhibitor as its anchor drug. It is highly likely that dolutegravir will replace efavirenz (EFV) [6]. It is also foreseeable that in the future, we will use long-acting depot antiretroviral therapy (ART) [7,8]. However, until then, he emphasized the importance of using effective prevention strategies, such as PrEP [9,10] and male circumcision, with effective linkage to care utilizing civil societies to facilitate roll-out and reduce HIV incidence in order to achieve 90-90-90 by 2020.

Morbidities

• HIV & aging: update & practical approach

With the use of combination antiretroviral therapy, many HIV-infected people are living longer and experiencing comorbidities similar to non-HIV-infected populations. Treatment and care management among the elderly is difficult and unique. Victor Valcour (University of California, CA, USA) pointed out that in the treatment for HIV-infected elderly it is important to assess the 'root cause' of the problems. Management is complicated by multiple comorbidities and polypharmacy. He highly recommended treating patients by an integrated multidisciplinary team that could offer wholistic care to manage this rapidly expanding population.

Roll-out strategies from a developing country's perspective

• Smart use of first-line in developing countries

For this region, Kiat Ruxrunghtham (Chulalongkorn University, Thailand) suggested optimizing doses as an approach to make best use of the current HIV modalities available. For example, lower doses of 400 mg EFV in combination with tenofovir (TDF) and emtricitabine (FTC) in ART-naive adults with HIV-1 has been shown to be noninferior to the standard dose of 600 mg at 48 and 96 weeks [11-13]. As a result of this, Thailand continues to prefer to use non-nucleoside reverse-transcriptase inhibitors, particularly EFV, as its first-line therapy because of its potency, efficacy, availability and cost [14]. The Thai Government Pharmaceutical Organization (GPO) is currently developing single tablet regimen of 400 mg EFV with TDF/FTC which can be conveniently administered once daily. If EFV cannot be tolerated, then it can be switched to rilpivirine [15,16].

Notable basic science lecture

• Immune activation & inflammation in HIV & clinical implications

Anthony Kelleher (Kirby Institute, University of New South Wales, Australia) elaborated on the immune response and immune activation. This extremely insightful plenary explained the benefits of starting ART early and the consequences for the immune system if treatment was deferred. When treatment is delayed, the thymus and lymph node tissues are damaged and have limited capacity to regenerate. This contributes to poorer clearance of various other infections such as HCV, HBV, CMV and HPV. However, even on ART, there is an increase in immune activation that results in morbidities, but earlier ART can decrease these events. Unfortunately, currently there are no clinically useful biomarkers and no drug interventions that have been shown to reduce immune activation. The most effective strategies for reducing complications arising from immune activation are lifestyle modifications (e.g., smoking cessation and exercise), treating clinically significant metabolic abnormalities such as hypertension and diabetes, starting ART early, and treating coinfections (e.g., HBV, HCV).

• The Great Debate: not offering PrEP to persons at high risk for HIV is unethical

The debate was facilitated by Jintanat Ananworanich (US Military HIV Research Program). She clarified the definitions to be used in the debate: PrEP was any regimen, 'offer' was defined as to provide and recommend, high risk population meant adolescents and adults or any gender who engage in sexual and/or injecting behaviors that put them at an elevated risk for HIV infection, and 'unethical' was defined as not morally correct. The 'Pro' team, comprised Donn Colby (SEARCH, TRCARC, Thailand) and Niwat Suwanpatthana (National Community Advisory Board Thailand), and provided a list of 'myths', which they correctly perceived the other team would use to argue why PrEP should not be offered to high-risk populations. These included cost, side effects, development of drug resistance, difficulties in scheduling PrEP before and after

sex, and lack of capacity in the system to accommodate the service. They emphasized that PrEP works and provided abundant research evidence (i.e., iPrEX, PROUD and IPERGAY) to support their statement, even noting a manuscript which one of the opposing debaters had published, recommending the use of PrEP for the European guidelines [17]. Nevertheless, the 'Con' team, represented by Juergen Rockstroh (University of Bonn, Germany) and Narin Hiransuthikul (Chulalongkorn University, Thailand) won the debate based on the technicality that data from clinical trials do not represent real-life situations and not all high risk populations are ready to adhere to PrEP, so this is not the right time yet to implement it. The 19th Bangkok International Symposium on HIV Medicine will be held on 18–20 January 2017.

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