HIV/AIDS Programme

MEETING REPORT

WHO–NIH INFORMAL CONSULTATION ON ANTIRETROVIRAL TREATMENT AS HIV PREVENTION: IMPLEMENTATION SCIENCE IN ASIA

26-28 March 2012, Siem Reap, Cambodia

Executive Summary

World Health Organization

DEPARTMENT OF HEALTH & HUMAN SERVICES · USA

NATIONAL INSTITUTES OF HEALTH

NIAID

WHO–NIH Informal Consultation on Antiretroviral Treatment as HIV Prevention: Implementation Science in Asia
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1. BACKGROUND

During 2010–2011, five trials that examined antiretroviral (ARV) agents for HIV prevention found a positive effect.[1,2,3,4,5] Of particular note, a clinical trial conducted by the HIV Prevention Trials Network (HPTN) showed that antiretroviral therapy (ART) reduced the risk of heterosexual transmission by 96%.[5] This trial confirmed similar results from observational studies and mathematical modelling.[6,7,8] The results had a galvanizing effect on ministries of health as well as the US President's Emergency Plan for AIDS Relief (PEPFAR)[9] and the World Health Organization (WHO).[10] Selected countries in Asia have subscribed to international commitments to reaching "zero new infections"[11,12] and see an opportunity to "close the HIV tap" by accelerating HIV prevention efforts and including earlier provision of ART as part of a comprehensive prevention plan.

Three important questions have been raised in the effort to scale up ART as prevention:

- What is the external validity of the results from the HPTN 052 trial? Specifically, will the same prevention benefits be seen within real-world settings and beyond heterosexual couples?
- How can ART as prevention be translated into effective programmes implemented at scale and at what additional cost?
- If ART is used for prevention as well as treatment, what implementation strategy will have the greatest overall impact on the epidemic?

Addressing these questions in the context of low-prevalence* and concentrated epidemics,†[13] such as those found in many Asian countries, is particularly important, given the lack of studies and trials conducted in these settings. Many national AIDS programmes have the capacity for longitudinal data collection and data analysis. Furthermore, the introduction of new interventions has traditionally been preceded by feasibility studies and demonstration or pilot projects as a form of implementation research.[14] A similar approach could critically inform policy decisions and optimize the delivery and expansion of treatment as prevention in a number of Asian countries.[15,16,17]

WHO is committed to a four-pronged approach:

1. Continue promoting the expansion of treatment according to the 2010 WHO recommendations.[18]

2. Support early implementation of the 2012 WHO guidelines on couples HIV testing and counselling and ART as prevention in serodiscordant couples.[19]

3. Promote the role of implementation science in treatment as prevention in populations among whom there are less conclusive data such as men who have sex with men, people who inject drugs and sex workers; and

4. Work towards developing a global consolidated guideline on the use of ARVs linking clinical, programmatic and operational dimensions.[20] This includes the development of metrics for monitoring and evaluating the impact of ART as prevention.

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*. HIV may have been present for many years but has never spread to a substantial level in any subpopulation, i.e. prevalence has not been consistently >5% in any defined subpopulation.

†. The spread of HIV has occurred in a defined subpopulation, i.e. prevalence is consistently >5 % in a defined subpopulation but is <1% in pregnant women.

Five countries in Asia – Cambodia, China, Indonesia, Thailand and Viet Nam – have announced plans to implement treatment as prevention in different settings and populations. These programmes and other related research projects could potentially inform the way forward for the global response to HIV/AIDS, especially within low and concentrated epidemics. In collaboration with PEPFAR and the US National Institutes of Health (NIH), WHO will promote implementation research on ART as prevention in these five countries, including the development of implementation research questions.[21,22] It is anticipated that the early programmatic and operational experience with ART as prevention in these countries will also benefit other countries by strengthening the evidence base, guiding policy decisions and helping to develop future normative guidance on the strategic use of ART for prevention and treatment.

2. OBJECTIVES OF THE CONSULTATION

This informal consultation held from 26 to 28 March 2012 in Siem Reap, Cambodia brought together representatives of national AIDS programmes, civil society and research teams from these five countries, as well as international experts and researchers on ART as prevention.

The objectives of the consultation were

- To discuss research issues and needs applicable to the five countries in the context of ART as prevention;
- To review country proposals and regional concept notes on implementation research on ART as prevention; and
- To identify next steps in implementing demonstration projects/research.

The outcomes of the consultation will inform national programmes and WHO's guidelines.

3. SUMMARY OF PRESENTATIONS AND DISCUSSIONS

Commonalities between the five countries in terms of ART as prevention

Existing epidemiological and HIV response data from the five national programmes suggest important commonalities, specifically: an HIV case load predominantly among key populations at higher risk (such as men who have sex with men, sex workers and people who inject drugs) and their regular sexual and/or injecting partners; low rates of HIV case-finding; and difficulty in maintaining adherence, especially among hard-to-reach, marginalized and stigmatized communities. The working definition of ART as prevention applied by participating countries was the use of ART in HIV-infected individuals irrespective of clinical staging and CD4 count.

It is estimated that current treatment scale up has already averted new HIV infections. For example, in China, approximately 17 000 new HIV infections have been averted. The question was also raised as to whether the continuing decrease in incident HIV cases in Cambodia and Thailand was due to high coverage following current treatment scale up. The reality of reduced investments by development partners and the increasing dependence on national budgets to fund HIV/AIDS programmes will mean optimizing both the treatment and prevention benefits of ART in the context of resource constraints.

All of these countries are emerging economies, have relatively strong national health systems and share the expressed political will to pursue introduction of highly efficacious treatment as prevention. Recent modelling efforts presented at the meeting using data from Viet Nam suggested the potential cost-effectiveness of prioritizing specific key populations at higher risk, which contribute the most to new infections, and optimizing HIV testing frequency among these groups. Similar analyses could be conducted in other countries to guide national programmes that plan to introduce ART as prevention.

The feasibility and acceptability of ART as prevention approaches in these countries

Many of the participating countries have taken important preparatory steps towards introducing ART as prevention. For example, China has already implemented a national policy to offer treatment irrespective of CD4 count for people living with HIV (PLHIV) who have a serodiscordant regular sexual partner. Thailand has done important work on the development of tools and processes for couples counselling, which could potentially support early ART initiation in this group. A major focus of implementation research includes identifying approaches to improve the uptake of HIV testing and retesting, acceptability of immediate treatment, retention in care and adherence to treatment.

However, costs and resource allocation remain an important issue. Countries gave examples of how national programmes have attempted to assess the cost implications, cost–benefit and cost-effectiveness of decisions on implementing ART as prevention at scale. These include calculating the potential cost savings from initiating treatment earlier, estimating the cost of expanded HIV case-finding in low and concentrated epidemic settings, use of better tolerated but more expensive tenofovir-containing first-line ART regimens, and comparing the cost of interventions to improve treatment adherence and retention with the potential costs of increased HIV drug resistance.

BOX 1:
OVERARCHING QUESTIONS FOR IMPLEMENTATION RESEARCH IN ASIA

1. What is the magnitude of the prevention benefit of ART in key populations such as men who have sex with men, sex workers and people who inject drugs in Asian settings?
2. How can the results of clinical trials be translated into effective programmes implemented at scale and at what additional cost?
3. In which settings should early ART be offered to have the greatest overall impact on the epidemic curve?
4. What is the appropriate mix of prevention interventions to optimize this impact?

Proposed implementation science research by the five countries (Box 1)

At the consultation, country teams presented concept notes for implementation science research and ongoing studies for optimizing the scale up of treatment as prevention in their

contexts. Each team's proposals were peer reviewed and suggestions were made for refining their research questions and methods. Ideas were exchanged on the tools and approaches developed by countries to address the cascade of interventions (i.e. HIV testing, linkages to care and treatment, retention in treatment and adherence support) necessary to make ART as prevention effective.

Indonesia and Thailand presented proposals on "test and treat" strategies‡ for MSM populations through clinics that offer one-stop services for multiple interventions. The Thailand study includes four sites in three geographically diverse provinces and is designed to assess the feasibility of intensified HIV testing approaches and immediate ART for prevention, including how to encourage routine testing behaviours among MSM with negative test results. In Indonesia, the study will evaluate whether intensive adherence counselling improves retention in and adherence to treatment among MSM who initiate ART before developing AIDS-related symptoms. A secondary outcome will measure the effect of STI coinfection on anal/rectal viral shedding among MSM with high levels of adherence to ART.

In **Cambodia and Viet Nam**, the proposed feasibility studies focus on offering partner testing to persons diagnosed with HIV in existing testing and counselling services; identification of serodiscordant couples, sexual networks and risky sexual behaviours; and offering ART to index patients irrespective of CD4 count or with CD4 counts of ≤500 cells/mm^3. In Viet Nam, given that the majority of index patients are expected to be people who inject drugs, it will be crucial to integrate ART services with harm reduction interventions. In Cambodia, the majority of index patients are anticipated to be current and former female sex workers, allowing for further investigation of the approaches necessary to optimize ART as prevention in addition to 100% condom use promotion.

China shared the extensive work done in implementing a national policy to provide ART for PLHIV with serodiscordant regular sexual partners. Through analyses of data from its routine monitoring system, China has launched efforts to identify and address some of the challenges encountered in preparing for the rapid roll-out of the policy. In keeping with this focus, China's proposed implementation science project will examine factors associated with seroconversion, including treatment side-effects and other factors associated with poor adherence among index patients on ART.

Methodological issues discussed included making the best use of monitoring data to identify