Report of the first WHO stakeholders meeting on rhodesiense human African trypanosomiasis

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Cover page: Illustration from the original "Positif dans la moelle osseuse" by Nestor Favre-Mossier, owned by the Perez Simarro family

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ABBREVIATIONS AND ACRONYMS

AAT	animal African trypanosomiasis
AO	acridine orange
BIIT	blood incubation infectivity test
CIRAD	Centre de coopération internationale en recherche agronomique pour le développement
COCTU	Co-ordinating Office for Control of Trypanosomiasis in Uganda
CSF	cerebrospinal fluid
DIB	development impact bond
DFID	Department for International Development (United Kingdom)
DFID RIU	DFID Research Into Use programme
DNDi	Drugs for Neglected Diseases initiative
DVO	district veterinary officer
ECF	East Coast fever
ECG	electrocardiogram
ELISA	enzyme-linked immunosorbent assay
FAO	Food and Agriculture Organization of the United Nations
FIND	Foundation for Innovative New Diagnostics
GMA	game management areas
HAT	human African trypanosomiasis
g-HAT	gambiense human African trypanosomiasis
IAEA	International Atomic Energy Agency
ICIPE	International Centre of Insect Physiology and Ecology
IDM	Innovative and Intensified Disease Management
IFAT	indirect fluorescent antibody test
IRD	Institut de Recherche pour le Développement
ISG	invariant surface glycoprotein
KALRO	Kenya Agricultural and Livestock Research Organisation
KETRI	Kenya Trypanosomiasis Research Institute
LAMP	loop-mediated isothermal amplification
LSTM	Liverpool School of Tropical Medicine
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
mAECT	mini-anion exchange centrifugation technique
mAECT BC	mAECT on buffy coat
mHCT	micro-haematocrit centrifugation technique
MoH	Ministry of Health
MoHSW	Ministry of Health and Social Welfare
MoLFD	Ministry of Livestock and Fisheries Development
MSC	modified single centrifugation

NASBA	nucleic acid sequence-based amplification
NGO	nongovernmental organization
NSSCP	National Sleeping Sickness Control Programme
NTD	neglected tropical disease
OIE	World Organisation for Animal Health
PAAT	Programme Against African Trypanosomiasis
PATTEC	Pan African Tsetse and Trypanosomiasis Eradication Campaign
PCR	polymerase chain reaction
QBC	quantitative buffy coat
r-HAT	rhodesiense human African trypanosomiasis
RAP	restricted application protocol
RBC	red blood cells
RBC lysis-AO	red blood cell lysis – acridine orange
RDT	rapid diagnostic test
RIME	repetitive insertion mobile element
RRTT	rapid response technical team
SACEMA	South African Centre for Epidemiological Modelling and Analysis
SAT	sequential aerosol technique
SEEG	Spatial Ecology & Epidemiology Group
SIT	sterile insect technique
SRA	serum resistance-associated gene
SRUC	Scotland's Rural College
STAG	Strategic and Technical Advisory Group
SOS	Stamping Out Sleeping sickness
UTCC	Uganda Trypanosomiasis Control Council
VSG	variant surface glycoprotein
WBC	white blood cell
WHO	World Health Organization
ZAWA	Zambia Wildlife Authority

1. Introduction

In response to a dramatic resurgence of human African trypanosomiasis (HAT) by the end of the 20th century, joint efforts by the World Health Organization (WHO) and partners since 2000 helped reverse the epidemic and led to a progressive decline in the number of new cases reported annually.[1] These efforts led also to scientific and technical advances in several domains, including epidemiology, diagnostic and therapeutic tools, and vector control.

In May 2007, representatives of HAT-endemic countries endorsed the goal of elimination of the disease as a public health problem.[2] In 2011, the WHO Strategic and Technical Advisory Group (STAG) for neglected tropical diseases (NTDs) judged elimination to be technically feasible and HAT was included in the WHO Roadmap on NTDs ("the Roadmap"), with a target for elimination as a public health problem by 2020.[3]

In January 2012, a number of partners from the public and private sectors launched the largest coordinated effort against NTDs and issued the *London Declaration on Neglected Tropical Diseases*,[4] a renewed, coordinated approach for accelerating the eradication, elimination or control of 10 NTDs by 2020. The partners pledged to work together to improve the lives of the 1.4 billion people affected by NTDs worldwide by enhancing the supply of existing medicines, stimulating collaborative research for new treatments and increasing funding for control or elimination activities. They targeted HAT for elimination alongside five other diseases, and endorsed the Roadmap.

In December 2012, national sleeping sickness control programmes (NSSCPs), experts from WHO collaborating centres and the STAG-NTD formulated the strategies, tools, monitoring indicators and milestones for the process of eliminating gambiense HAT (g-HAT). They considered elimination of g-HAT as a public health problem as an intermediate objective that should be followed by the elimination of the disease, defined as the absence of transmission resulting in zero cases reported in all foci, and proposed 2030 as the deadline for this new outcome of elimination.[5]

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[1] Simarro PP, Diarra A, Ruiz-Postigo JA, Franco JR, Jannin J. The Human African Trypanosomiasis Control and Surveillance Programme of the World Health Organization 2000–2009: the way forward. PLoS Negl Trop Dis. 2011;5:e1007.

[2] Report of a WHO informal consultation on sustainable control of human African trypanosomiasis. Geneva, 1–3 May 2007. Geneva: World Health Organization; 2007 (WHO/CDS/NTD/IDM/2007.6; http://whqlibdoc.who.int/hq/2007/WHO_CDS_NTD_IDM_2007.6_eng.pdf).

[3] Accelerating work to overcome the global impact of neglected tropical diseases: a roadmap for implementation. Geneva: World Health Organization; 2012 (WHO/HTM/NTD/2012.1; http://www.who.int/neglected_diseases/NTD_RoadMap_2012_Fullversion.pdf).

[4] The London Declaration on Neglected Tropical Diseases (http://www.unitingtocombatntds.org/downloads/press/london_declaration_on_ntds.pdf).

[5] Report of a WHO meeting on elimination of African trypanosomiasis (*Trypanosoma brucei gambiense*). Geneva, 3–5 December 2012. Geneva: World Health Organization; 2013 (WHO/HTM/NTD/IDM/2013.4; http://apps.who.int/iris/bitstream/10665/79689/1/WHO_HTM_NTD_IDM_2013.4_eng.pdf).

In April 2013, a WHO Expert Committee on human African trypanosomiasis control and surveillance updated the epidemiological patterns of the disease, diagnostic approaches and new therapeutic regimens. The Committee addressed the recommendations for achieving disease elimination and conversely to g-HAT, being rhodesiense HAT (r-HAT) – a zoonosis with both domestic and wild hosts – its elimination as total interruption of transmission was therefore not considered technically feasible at that time.[6] Elimination of r-HAT requires a tailored, multisectoral approach not necessarily the same as that developed for g-HAT.

In view of this situation, WHO convened two separate meetings of stakeholders: one related to g-HAT and the other to r-HAT. In March 2014, WHO held the first stakeholders meeting on the elimination of g-HAT, which was complemented in October 2014 by this meeting of the main stakeholders working to fight r-HAT. This meeting updated the status of r-HAT transmission at the country level and the challenges of health ministries in tackling the disease (see Agenda in Annex 1). The meeting was intended to reinforce the cohesion of stakeholders and the spirit of cooperation through the different sectors concerned with the prevention and control of r-HAT.

2. Objectives

The objectives of the meeting were:

1. To update the current status of the disease transmission, country capacities and plans for tackling the disease.
2. To understand the epidemiology including disease distribution and risk, the models for estimating under-detection, the geographical variations of in clinical presentation, the roles of domestic and wild animal reservoirs and the subsequent different transmission patterns and control approaches, including vector control.
3. To update current research and development efforts for improving diagnostic and treatment tools.
4. To define the goals for achieving the control of r-HAT, the need for a multisectoral approach and to discuss the strategy for controlling r-HAT and the coordination mechanisms.