

Summary Report after 41 Tropical Medicine Excursions for Healthcare Professionals to Kenya, Uganda and Tanzania (1995-2013)

TROPMEDEX

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Abstract

Abstract: Due to growing tourism to the tropics more travellers are returning with tropical infections. Many doctors in the developed world have difficulties in diagnosing malaria or Dengue fever in the returned traveller because they have never been trained in clinical tropical medicine. Between 1995-2013 TROPMEDEX has organized 41 excursions to East Africa. During the 2 week long round trips, participants visited hospitals, healthcare projects and research institutes in the respective countries. Through a combination of ward rounds, field excursions, laboratory sessions and lectures the most important tropical infectious diseases were covered in the endemic areas. Of the 41 excursions 18 took place in Kenya, 18 in Uganda and 5 in Tanzania. A total of 397 healthcare professionals have been trained with an average of 10 participants per excursion. Among them were 211 women (53%) and 186 men (47%). The average age was 49 years. Of the participants, 230 (58%) came from Europe, 90 (23%) from USA/Canada, 38 (9%) from Australia/New Zealand, 30 (7%) from Asia and 9 (3%) from Africa. Their specialized fields were divided as follows: 143 (36%) GP's, 82 (21%) physicians, 59 (15%) ID specialists, 28 (7%) public health experts, 21 (5%) occupational health experts, 18 (5%) microbiologists, 12 (3%) dermatologists, 11 (3%) paediatricians, 9 (2%) nurses, 4 gynaecologists (1%) and other healthcare professionals. The unique structure of the TROPMEDEX excursions enables healthcare professionals to experience tropical diseases where they evolve. Further educational courses in the tropics will motivate more clinicians to strengthen their experience in clinical tropical medicine and thereby improve the healthcare of returning travellers.

keywords: Tropical Medicine Excursions, Travellers' Health, Malaria, Dengue Fever, East Africa,

Introduction

Travelling to the tropics and subtropics is becoming more popular in the industrialized world¹. As a result, an increasing number of tourists return to their home countries with tropical infectious diseases^{2,3}. The continuous stream of migrants, refugees and asylum-seekers from the developing world to Europe⁴ and other continents presents healthcare professionals with infectious diseases which they have not seen before. Global warming has contributed to an increase of Dengue fever⁵ and malaria⁶ in temperate climate zones and will continue to do so in the future.

Studies in American and European hospitals have shown that an increasing number of adults and children with malaria were not recognized on first examination⁷. These observations underline the fact that healthcare professionals in the Western world require "intensified" hands on experience in clinical tropical medicine and travellers' health. The author has organized 41 Tropical Medicine Excursions to Kenya, Uganda and Tanzania and reviews his experience.

Design

During the 2 week long round trip TROPMEDEX excursions (on average 1500 km by 4-wheel drive (Photo 1), bus and plane) participants visited various teaching hospitals, healthcare projects, research institutes and non-governmental organizations in the respective countries.



Photo 1. On the road in Tanzania

This was done in collaboration with the Joint Clinical Research Center in Kampala (Uganda), the Flying Medical Service in Arusha (Tanzania) or the African Medical Research Foundation in Nairobi (Kenya). Through a combination of ward rounds with informal bedside teaching on-site (Photo 2), laboratory sessions (microscopic examination of parasites [Photo 3] in the blood, stool, urine and skin) and lectures in English, the most important tropical infectious diseases were covered in the endemic areas.



Photo 2. Bedside teaching.



Photo 3. Laboratory session in the field

The curriculum included the epidemiology, pathogenesis, clinical manifestations, diagnosis, treatment, prevention and control of: schistosomiasis, lymphatic filariasis (Photo 4), onchocerciasis, malaria, African trypanosomiasis, visceral leishmaniasis (Photo 5), amoebiasis, typhoid fever, tetanus, brucellosis, cholera, shigellosis, leprosy, tuberculosis, Buruli ulcer, Dengue fever, HIV/AIDS and related opportunistic infections as well as other diseases depending on the country visited.



Photo 4. Patient with lymphatic filariasis

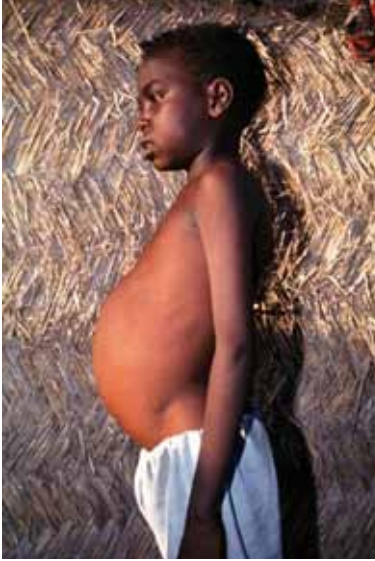


Photo 5. Patient with visceral leishmaniasis

The participants were updated on travellers' health - WHO vaccination guidelines, travellers' diarrhoea, differential diagnosis of fever and diarrhoea in returning travellers, altitude sickness, diving medicine, poisonous African reptiles, medical botany, traditional medicine - and explored the fantastic landscapes (Photo 6) and prolific flora and fauna of East Africa on medical field excursions (Photo 7).



Photo 6. African landscape



Photo 7. Medical field excursion

Accreditation

At the end of the excursion, participants received a certificate of 60 CME hours (20 hours – ward rounds; 15 hours – medical field excursions, 15 hours – lectures; 10 hours – laboratory sessions) from the Medical Association (Ärzttekammer Nordrhein) in Düsseldorf, Germany.

Results

Between 1995 and 2013 a total of 41 Tropical Medicine Excursions have been carried out and supervised by the author. Eighteen took place in Kenya, 18 in Uganda and 5 in Tanzania. A total of 397 healthcare professionals from all over the world have been trained on clinical tropical medicine and travellers' health with an average of 10 participants per excursion. Among them were 211 women (53%) and 186 men (47%). The average age was 49 years. Of the participants, 230 (58%) came from Europe, 90 (23%) from USA/Canada, 38 (9%) from Australia/New Zealand, 30 (7%) from Asia and 9 (3%) from Africa. Their specialized fields were divided as follows: 143 (36%) general practitioners, 82 (21%) physicians, 59 (15%) infectious diseases specialists, 28 (7%) public health experts, 21 (5%) occupational health experts, 18 (5%) microbiologists/laboratory specialists, 12 (3%) dermatologists, 11 (3%) paediatricians, 9 (2%) nurse practitioners, 4 gynaecologists (1%) and other healthcare professionals.

Discussion

Because of the rise in international travel to tropical destinations, more physicians will need to give pre-travel advice and more will face tourists returning with tropical infectious diseases. However, many of them have not been trained in clinical tropical medicine and travellers' health. A large survey among infectious disease practitioners in 2009 in the USA had shown that 61% reported inadequate training in travel medicine during their fellowship years⁸. In Canada 40% of the clinics would need to improve education of their staff in order to keep up with travel medicine practice⁹.

Teaching medical staff can be done via lectures, the internet, or computer-based resources¹⁰. However, hands-on-experience in clinical tropical medicine and travellers' health can be obtained only when healthcare professionals see and examine patients with tropical infectious diseases. Several tropical medicine teaching institutions in Europe, such as the Bernhard-Nocht Institute in Hamburg, Germany¹¹ and the London School of Hygiene and Tropical Medicine (personal experience) provide hospital services for tropical infectious diseases. However, because of the low admission number of patients, the teaching experience is limited.

Two excellent 2 week long Tropical Medicine courses in the tropics are worth mentioning here. The Gorgas Expert Course at the Universidad Peruana Cayetano Heredia in Lima, Peru, and the Asian Clinical Tropical Medicine course at the Mahidol University in Bangkok, Thailand. Both courses offer intensive hands-on experience to a large number of patients in a short period of time in order to improve clinical skills. This is primarily done in large teaching hospitals in Lima or Bangkok respectively.

The round-trip TROPMEDEX excursions to Africa are designed in such a way that participants are taught on clinical tropical medicine in the endemic regions where the diseases evolve.

Two typical excursion days in Uganda would consist of the following activities:

1st Day: Between Jinja (the source of the White Nile) and Lake Victoria participants pass an area endemic for African trypanosomiasis. After a lecture on sleeping sickness, the participants attend rounds in a mission hospital, where they examine patients with confirmed African trypanosomiasis and discuss signs and symptoms and treatment with the doctor in charge. Following a laboratory session (Photo 8) on diagnostic techniques for sleeping sickness (Photo 9), the visiting doctors are guided by a senior entomologist through a Tsetse fly control center.



Photo 8. Laboratory session - African Trypanosomiasis

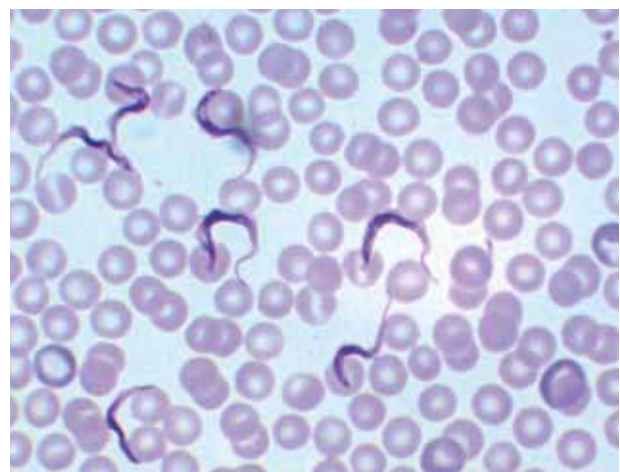


Photo 9. Thin blood film with Trypanosomes

The day ends with a medical excursion to a national park, where participants, among other animals, see antelopes (Photo 10) – the reservoir of *T. brucei rhodesiense* – and discuss prevention and control measures with senior epidemiologists from the Ministry of Health.



Photo 10. Antelopes - Reservoir of *Trypanosomiasis rhodesiense*



Photo 12. Cerebral malaria in an infant

2nd Day: The visiting doctors travel by car from Jinja to Mbarara (crossing the equator at halfway, (Photo 11) in Western Uganda, an area endemic for malaria. After a malaria lecture, laboratory session (performing the thin and thick blood film) and bedside-teaching on the paediatric ward (Photo 12), they visit a malaria control project followed by an evening lecture on the differential diagnosis of fever in travellers returning from the tropics.



Photo 11. Group photo with Japanese participants at the equator, Uganda

The unique structure of the 2 week round trip TROPMEDEX excursions to Uganda, Tanzania and Kenya enables healthcare professionals to experience tropical infectious diseases where they occur. Jason Toth (MD), a former participant from California, USA, said after the course to Uganda: “You study tropical diseases in medical school, but you never put a face on these infections until you see patients with them.” Further round trip educational courses in other tropical regions of the world will hopefully motivate more clinicians to strengthen their experience in clinical tropical medicine and travellers’ health and thereby improve the healthcare of returning travellers.

Acknowledgement: I want to thank the medical staff in the hospitals, research institutes and non-governmental organizations in East Africa for their support and continuous collaboration.

For further information check www.tropmedex.com

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