EuroTravNet

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European Travel and Tropical Medicine Network of the *International Society of Travel Medicine*

European Centre for Disease Prevention and Control Collaborative Network for Travel and Tropical Medicine

EUROTRAVNET SCIENCE WATCH : MARCH – APRIL 2009

Scientific Advances – A world malaria map: *Plasmodium falciparum* endemicity in 2007.
Hay SI, et al. A world malaria map: *Plasmodium falciparum* endemicity in 2007. PLoS Med 2009 6(3):e1000048. doi:10.1371/journal.pmed.1000048

Scientific Advances – Imported malaria in children in industrialized countries, 1992-2002.
Stäger K, et al. Emerg Infect Dis. 2009 February;15(2):185-91.

Scientific Advances – Chagasic Cardiomyopathy in Immigrants from Latin America to Spain
Ana Pérez de Ayala, et al. Emerg Infect Dis 2009 (April) 15(4) : 607-608

Scientific Advances – Antiviral treatment of chikungunya virus infection.
de Lamballerie X, et al. Infect Disord Drug Targets. 2009 March;9(2):101-4.

Scientific Advances – Mediterranean spotted fever in Algeria--new trends
Mouffok N, et al. Int J Infect Dis. 2009 March;13(2):227-35.

Scientific Advances – Swedish traveller with *Plasmodium knowlesi* malaria after visiting Malaysian Borneo.
Bronner U, et al. Malar J. 2009 January 16;8:15.

Scientific Advances – Changes in the Treatment Responses to Artesunate-Mefloquine on the Northwestern Border of Thailand during 13 Years of Continuous Deployment.
Carrara V, et al. (2009) PLoS ONE 4(2): e4551. doi:10.1371/journal.pone.0004551

Scientific Advances – Risk of hepatitis B for travelers: is vaccination for all travelers really necessary?
Sonder G, et al. J Trav Med. 2009; January/February; 16(1): 18-22

Public health development – WHO publication International Travel and Health
World Health Organisation - 2009-03-20

Public health development – Risk of Schistosomiasis among recreational users of the Nile River, Uganda 2007
Morgan O, et coll., CDC., February 2009.

Events – 11th Conference of the International Society of Travel Medicine (CISTM11)
Date – 2009/05/24-28 – Budapest, Hungary

Scientific Advances – A world malaria map: *Plasmodium falciparum* endemicity in 2007. PLoS Med 6(3):e1000048.

Hay SI, Guerra CA, Gething PW, Patil AP, Tatem AJ, et al. A world malaria map: *Plasmodium falciparum* endemicity in 2007. PLoS Med 2009 6(3):e1000048. doi:10.1371/journal.pmed.1000048

Description

The researchers describe a new evidence-based method for generating continuous maps of *P.falciparum* endemicity within the area of stable malaria risk over the entire world's surface. They utilise *P.falciparum* parasite rates (*Pf*PR; the percentage of a population with parasites detectable in their blood) and "model-based geostatics" to produce a *P.falciparum* endemicity map for 2007. The map represents an important new resource that indicates areas where malaria control can be improved (for example, Africa) and other areas where malaria elimination may be technically possible. In addition, planned and annual updates of the global *P.falciparum* endemicity map and the *Pf*PR database will help public health experts to monitor the progress of the malaria control community towards international control and elimination targets.
(The map, together with the data used in its construction, will be freely available) at http://www.map.ox.ac.uk/map_download.html

Link to the article
http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pmed.1000048

ECDC comment: YYYY-MM-DD
This map is the first in an annual series, which will help monitor and evaluate progress towards international targets for malaria control and elimination
Links if needed

Keywords : Malaria - Falciparum

Scientific Advances – Imported malaria in children in industrialized countries, 1992-2002.

Stäger K, Legros F, Krause G, Low N, Bradley D, Desai M, Graf S, D'Amato S, Mizuno Y, Janzon R, Petersen E, Kester J, Steffen R, Schlagenhauf P.
Emerg Infect Dis. 2009 February;15(2):185-91.

Description

This paper analyses data on imported paediatric malaria and travel statistics in 11 industrialised countries. More than 17,000 cases of malaria in children were reported and most of these cases had been acquired in Africa. The countries where paediatric malaria was most likely to be acquired (more than 100 malaria cases per 10,000 arrivals) were, in order of risk, Comores, Democratic Republic of Congo, Central African Republic, Guinea, Mali, Cote Ivoire, Congo, Nigeria, Benin, Sierra Leone, Cameroon, Ghana and Togo and reflected the African nationality/origin of the immigrant communities in industrialised countries rather than popular tourist destinations**.** Many migrants seem to mistakenly believe that they retain their semi-immunity against malaria parasites after immigrating to a non-endemic country, but immunity usually wanes rapidly (within 6 months) when there is no exposure to Plasmodium infected mosquitoes, although there might be some kind of immunological memory to malaria. This paper shows that the situation of imported malaria in children is complex and faces many problems including increasing global migrant and tourist travel, growing proportions of the life threatening falciparum malaria combined with increasing resistance of malaria parasites to chemoprophylactic drugs and a lack of knowledge about and experience with imported malaria in non-endemic industrialised countries.

Link to the article

http://www.cdc.gov/eid/content/15/2/185.htm

ECDC comment: YYYY-MM-DD

The paper is important in that it accurately defines malaria risk for children and shows that specific research on malaria among children VFR is warranted. At present, immigrant children VFR who are most likely to acquire malaria are also those least likely to use adequate prevention strategies. The paper highlights the urgent need for culturally sensitive approaches involving schools, the travel industry and community groups to create awareness about malaria risk and prevention. The problem of imported malaria should, above all, be recognized by the local health authorities in areas with large ethnic minority communities particularly with communities of African origin.

Links if needed

Keywords : Malaria, children, visiting friends and relatives (VFR)

Scientific Advances – Chagasic Cardiomyopathy in Immigrants from Latin America to Spain

Ana Pérez de Ayala, José-Antonio Pérez-Molina, Francesca Norman, and Rogelio López-Vélez. **Emerg Infect Dis 2009 (April) 15(4) : 607-608**

Description

An estimated 8 million persons in 21 countries in the Western Hemisphere are infected by *Trypanosoma cruzi*, the cause of Chagas disease. International migration has changed the epidemiologic patterns of Chagas disease. The authors present here and discuss the risk of imported Chagas in Europe, with two possible scenarios to estimate the number of chagasic cardiomyopathies that may arise in the immigrant population.

Link to the article

http://www.cdc.gov/eid/content/15/4/607.htm

ECDC comment: YYYY-MM-DD

Spain is second to the United States in having the largest number of immigrants from Latin America. In 2008, immigrants accounted for 11.3% of the population in Spain. A total of 1,607,699 were from T. cruzi–endemic areas; of these, 239,942 are from Bolivia. Chronic Chagas disease was diagnosed in 120 patients during 2003–2008 at the Tropical Medicine, Ramón y Cajal Hospital, in Madrid, Spain. Of these patients, 22.5% had cardiac involvement and 95.8% were from Bolivia. On the basis of these estimates, 5,897–29,409 cases of chagasic cardiomyopathy may be diagnosed in the near future in Spain. T. cruzi infection may become a public health problem in countries in Europe that receive immigrants from disease-endemic areas. Thus, chagasic cardiomyopathy may soon have a serious effect on public health in Spain.

Links if needed

Keywords : Chagas – Trypanosomiasis – immigrants - Spain - Europe

Scientific Advances – Antiviral treatment of chikungunya virus infection.

de Lamballerie X, Ninove L, Charrel RN. Infect Disord Drug Targets. 2009 March;9(2):101-4.

Description

Chikungunya (CHIK) fever is a tropical arboviral disease responsible for acute polyarthritis which can last for weeks to months. Since 2004, several million cases of chikungunya virus disease have occurred in autochthonous populations and in travelers who were diagnosed after they returned home from epidemic areas. In 2007, the chikungunya virus (CHIKV) reached Europe. No antiviral treatment is currently available. Chloroquine has been used in the past but recent studies suggest that it is not or poorly active *in vivo.* A number of tracks are currently under investigation and new animal models have been made available, including a mouse model and a non-human primate model.

Link to the article

http://www.bentham.org/cdtid/contabs/cdtid9-2.htm

ECDC comment: YYYY-MM-DD

CHIKV has be shown to be able to spread throughout the world and all physicians, particularly those in the field of Infectious diseases and travel medicine should be prepared to encounter this arboviral infection that represent a paradigm for emerging arboviral infections. Patients infected with CHIKV remains symptomatic after weeks and present with chronic peripheral rheumatism, characterized by severe joint pain and multiple tenosynovitis, with a dramatically limited ability to ambulate and carry out activities in daily life Follow-up of infected patients have demonstrated slow improvement in joint pain and stiffness despite symptomatic treatment, mainly antiinflammatory and analgesic drugs. The authors review here the main perspectives of chikungunya antiviral treatment.

Links if needed

Keywords : Chikungunya – Arbovirus

Scientific Advances – Mediterranean spotted fever in Algeria--new trends

Mouffok N, Parola P, Lepidi H, Raoult D. Int J Infect Dis. 2009 March;13(2):227-35.

Description

Mediterranean spotted fever (MSF) due to *Rickettsia conorii* is the most important tick-borne disease occurring in North Africa. The authors report a prospective study conducted in Oran, the second largest city in Algeria. With a total of 167 documented cases, they give a unique panel of clinical aspects of MSF as well as new trends in this disease. Although some aspects of MSF were found to be in accordance with the general epidemiology of the disease, uncommon aspects were found, including increased incidence and the presence of multiple inoculation eschars in 12% of patients. The role of climatic changes in alterations of host-seeking and feeding behaviors of the vectors, including the brown dog tick Rhipicephalus sanguineus, is discussed. Also, 49% of patients were hospitalized with a severe form. The global death rate was 3.6%, but it was 54.5% in patients hospitalized with major neurological manifestations and multiorgan involvement.

Link to the article

http://www.ijidonline.com/article/S1201-9712(08)01423-9/abstract

ECDC comment: YYYY-MM-DD

In recent years, tick-borne rickettsioses have emerged in the field of Travel medicine. This paper highlight 2 aspects of importance. First, MSF might be severe and even fatal. Furthermore, the role of climatic changes in alterations of host-seeking and feeding behaviors of vectors is an ongoing debate of public importance. For travlers, it should be remember that the best method to avoid tick bites comprises two components: a topical DEET (N,N-Diethyl-m-toluamide) repellent applied to exposed skin and treatment of clothing with permethrin.

Links if needed

Keywords : Rickettsial Infections

Scientific Advances – Swedish traveller with *Plasmodium knowlesi* malaria after visiting Malaysian Borneo.

Bronner U, Divis PC, Färnert A, Singh B. Malar J. 2009 January 16;8:15.

Description

Plasmodium knowlesi is typically found in nature in macaques and has recently been recognized as the fifth species of *Plasmodium* causing malaria in human populations in south-east Asia. Until recently, *Plasmodium knowlesi* malaria in humans was misdiagnosed as *Plasmodium malariae*. Human infection with *P. knowlesi* are now known to be widely distributed across Malaysian Borneo and extend to Peninsular Malaysia. Because *P. knowlesi* replicates every 24 h, rapid diagnosis and prompt effective treatment are essential malaria. The authors describe a case of knowlesi malaria in a Swedish man, who became ill after returning from a short visit to Malaysian Borneo. His *P. knowlesi* infection was not detected using a rapid diagnostic test for malaria, but was confirmed by PCR and molecular characterization.

Link to the article

http://www.malariajournal.com/content/8/1/15

ECDC comment: YYYY-MM-DD

This paper recalls that the diagnosis of malaria infections cannot be only based on rapid diagnostic tests. They often miss the diagnosis of the *P. ovale* and *P. malariae* infections and also the *P. knowlesi* infections. The research of malaria infections must obligatorily comprise a microscopic method with concentration. *P. knowlesi* is still badly known in the European countries. This article shows that the risk is real for the travellers returning from its endemic areas.

Links if needed

Keywords : Malaria

Scientific Advances – Changes in the Treatment Responses to Artesunate-Mefloquine on the Northwestern Border of Thailand during 13 Years of Continuous Deployment.

Carrara VI, Zwang J, Ashley EA, Price RN, Stepniewska K, et al. (2009) PLoS ONE 4(2): e4551. doi:10.1371/journal.pone.0004551

Description

Artemisinin combination treatments (ACT) are recommended as first line treatment for falciparum malaria throughout the malaria affected world and are responsible of a recent and sharp drop in malaria incidence and mortality where they are used. The team which was at the origin of the diffusion of these drugs presents a review of the efficacy of a 3-day regimen of mefloquine and artesunate regimen (MAS3), over a 13 year period of continuous deployment as first-line treatment in camps for displaced persons and in clinics for migrant population along the Thai-Myanmar border. Despite a remaining efficacy of the artesunate-mefloquine association, the authors evidence a modest but significant increase in resistance of P.falciparum to this drug with a slowing of parasitological response to artesunate and an associated increase in gametocyte carriage. This could be the beginning of the end of the honey moon offered by ACTs. It is remarkable that resistance to the ACT emerges in the same area of the South-Eastern Asia where resistance to chloroquine then with mefloquine had emerged. It is unlikely that these resistances remain confined in this area. One must expect, in the next 10 years, with their world wide diffusion and a new increase in the burden of malaria whereas recent successes let some hope of being able to eradicate it.

Link to the article

http://www.plosone.org/article/info:doi/10.1371/journal.pone.0004551

ECDC comment: YYYY-MM-DD

The treatment by ACT of the P. falciparum infections of travellers returning from South-Eatsern Asia, in particular from Thailand or Cambodia, should be attentively monitored. Researchs are on the way to identify the molecular determinants of these resistances. While it is very unlikely that one can contain these resistances in this zone, other research should be launched to prepare the post-ACT area.

Links if needed

Keywords : Malaria

Scientific Advances – Risk of hepatitis B for travelers: is vaccination for all travelers really necessary?

Sonder G, van Rijckevorsel G, van den Hoek A. J Trav Med. 2009; January/February; 16(1): 18-22

Description

Behavioural studies in travelers suggest that 33% - 76% of all travelers to hep B virus endemic countries are at risk for HBV infection. The authors have analysed restrospectively the characteristics and risk factors of all reported acute HBV patients in Amsterdam, the Netherlands from January 1 1992 to December 31 2003. The estimated incidence in travelers from Amsterdam to HBV endemic countries in 4.5/100,000 travelers. Two thirds of these patients were immigrants who lived in Amsterdam and who had visited their friends and relatives in their country of origin. In 12 years only three Dutch short-term tourists contracted HBV while travelling, all by heterosexual contacts. HBV risk for short-term tourists to HBVendemic countries appears here to be very low. For the authors discuss, vaccination of shortterm Dutch tourists is not necessary but immigrants run a higher risk irrespective of travel or duration of travel. This last group should be advised vaccination.

Link to the article
https://www.istm.org/WebForms/Members/IndexSecure.aspx?sUrl=%2fwebforms%2fmembers%2factive%2fjtm%2fDefault.aspx

ECDC comment: YYYY-MM-DD

This study debates the justification of use of Hepatitis B vaccine for short term tourist travel, as it appears in the this study that this group of travellers is at very low, even when travelling in highly endemic areas. As expected from other studies, immigrants are shown to be at higher risk of HBV and vaccination is said to be justified.

Links if needed

Keywords : Hepatitis B

Public health development – WHO publication International Travel and Health

World Health Organisation - 2009-03-20

Description

The 2009 edition of the WHO publication International Travel and Health (ITH) is available online at: http://www.who.int/ith/chapters/en/index.html
This edition features a new chapter on psychological health, updated information on yellow fever risk and vaccine requirements, malaria risk and rabies risk. Orders of the publication can be placed via the following link:
http://www.who.int/bookorders/anglais/detart1.jsp?sesslan=1&codlan=1&codcol=18&codcch=9
WHO has updated its International Travel and Health web site www.who.int/ith which now also features:
- an interactive map for yellow fever and malaria country requirements and information: http://www.who.int/tools/geoserver/www/ith/index.html
- updated and improved disease distribution maps
- latest updates for travellers
- useful country web links on travel and health: http://www.who.int/ith/links/national_links/en/index.html

Link to the article

ECDC comment:

This yearly publication is a reference for public health professionals and health professionals involved in travel and health. One of the main features are the leagl requirements and recommendations for yellow fever vaccination at country level. Efforts are made to improve the website which is now more user friendly and will become the reference update on a daily basis.

Links if needed

Keywords : Travel – Yellow fever – Malaria - Rabies - Vaccine

Public health development – Risk of Schistosomiasis among recreational users of the Nile River, Uganda 2007

Morgan O, et coll., Division of Emerging Infections and Surveillance Services (DEISS), Centers for Disease Control and Prevention, USA, February 2009

Description

The final report from the study of schistosomiasis among white water rafters and kayakers in Uganda has been released. The study included 150 individuals from 22 countries. Of 113 individuals eligible for follow-up, 61% completed the study. The risk of infection was highest among individuals who reported doing both kayaking/rafting and swimming (27%, n=7/26). The risk was similar for individuals who reported just kayaking/rafting (15%, n=4/26) or swimming only (13%, n=1/8). Of nine individuals with no water contact, none were infected. Considering that 12,000 people go rafting in Uganda each year, this study confirms that schistosomiasis is an important health issue in Uganda and for countries to which travelers return.

Link to the article

ECDC comment:

Exposure to schistosomiasis is classically associated with wading or swimming in slow moving fresh-water in endemic countries. This study confirms that schistosomiasis remains an important health issue in Uganda, and that white-water rafting should be considered as a risk for exposure. Pre-travel health advice regarding schistosomiasis should given to those intending to go white-water rafting; screening should be considered for those who have had such potential exposure, on their return.

Links if needed

Keywords : Schistosomiasis - Uganda

Events – 11th Conference of the International Society of Travel Medicine (CISTM11)

Date – 2009/05/24-28 – Budapest, Hungary
Description
The 11th Conference of the International Society of Travel Medicine (CISTM11) will held in Budapest, Hungary at the ELTE University Conference Centre from May 24–28, 2009
This conference is intended for all who are interested in state of the art clinical practice, research, and education, in the field of travel and migration medicine. The target audience includes physicians, nurses, pharmacists, and students involved in primary care, occupational, migrant and public health, infectious disease, emergency and wilderness medicine. Also, it is designed to meet the needs of the travel media and industry as well as manufacturers of travel health-related products, drugs and vaccines. The biennial ISTM conferences are established as the leading venue for the practice and science of the discipline of travel medicine. As usual, educational formats will include Plenaries and Symposia, Debates, Workshops, Original Scientific Presentations, Meet the Experts, Case of the Day and abstract presentations. Satellite programs and sponsored events will also be offered.

Link to the website: www.istm.org
Contact: cistm11@istm.org

Keywords : Travel Medicine - Conference - Hungary

ECDC TRAVEL MEDICINE REVIEW TEMPLATE

Proposal of template for ECDC review prepared by Eurotravnet.

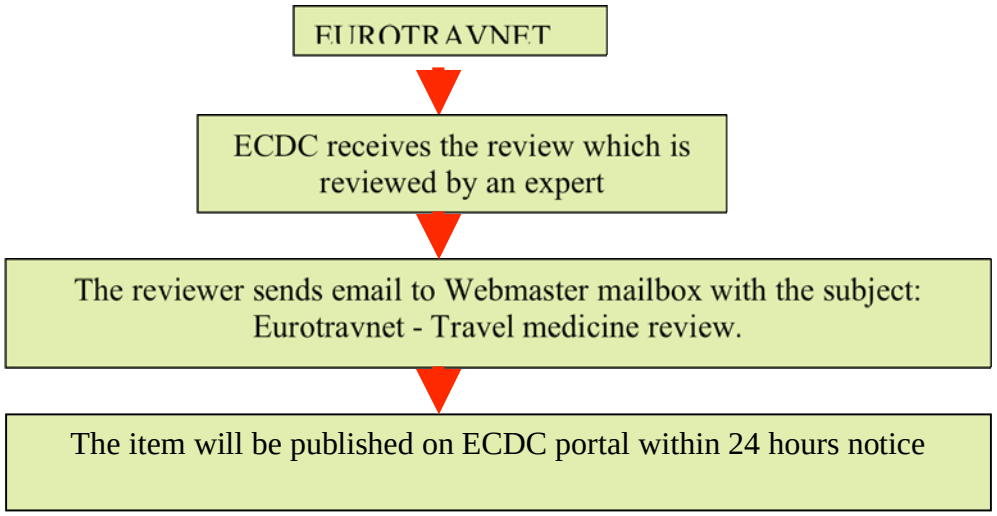
Introduction

The review will include (see templates at the end of the document):

- **Scientific advances**: updates on significant publications/news. EuroTravNet should report on and give a short comment interpretation of ground breaking information and new developments.
- **Public health developments:** update on significant PH developments in travel/tropical medicine.
- **Events** (will be put directly to the calendar): such as relevant conferences, meetings, etc

Reviewing process

These items will be sent to the ECDC support mailbox (support@ecdc.europa.eu) by Eurotravnet. An ECDC reviewer will check the review and will approve it. The final clearance for publishing the review on ECDC portal will be given by the Preparedness and Response Unit at ECDC.



Minimum list of diseases to be covered by Eurotravnet (as indicated in the CfT) –

African Trypanosomiasis or Sleeping Sickness
Alphavirus causing human disease (Ross River, Barmah Forest and other Alphavirus)
Arenavirus causing human disease (Machupo, Guanarito, Junin)
Amebiasis
American Trypanosomiasis or Chagas Disease
Anthrax
Avian influenza
Brucellosis
Campylobacter infections
Chickenpox (Varicella)
Chikungunya fever
Cholera
Coccidioidomycosis
Cryptosporidiosis (Cryptosporidium infection)
Cyclospordiasis (Cyclospora infection)
Dengue Fever
Diphtheria
Filariasis
Flavivirus causing human disease (Saint Louis encephalitis, Japanese encephalitis, Tickborne encephalitis, West Nile, Murray Valley and other Flavivirus)
Giardiasis (Giardia infection)
Haemophilus influenzae meningitis
Hantavirus infection
Henipavirus causing human disease (Nipah, Hendra)
Hepatitis A, B, C and E
Histoplasmosis
HIV/AIDS and other sexually transmitted infections
Human papillomavirus (HPV)
Influenza
Leishmaniasis (Leishmania infection)
Legionellosis
Leptospirosis
Listeriosis
Lyme disease
Malaria
Measles
Meningococcal disease
Mumps
Onchocerciasis (river blindness) 29
Plague
Phlebovirus causing human disease (Sand Fly Fever Naples, Sand Fly Fever Sicilian, Toscana, and others)
Pneumococcal disease
Poliomyelitis
Rabies
Ross River Virus Infection
Rickettsial Infections
Rotavirus
Rubella (German measles)
SARS (Severe Acute Respiratory Syndrome)
Schistosomiasis
Smallpox
Tetanus
Tuberculosis
Tularemia
Typhoid fever

Viral hemorrhagic fevers (e.g., Ebola, Marburg, Lassa, Rift Valley, Congo-Crimean Haemorrhagic Fever)
Whooping cough (*B. pertussis*)
West Nile Virus
Yellow Fever

Keywords/metadata

If we want to publish the documents in the right sections on the portal, we need to get the appropriate keywords. The contractor will have to provide the keywords related to each documents.

The keywords/metadata used in the ECDC portal are:

- List of Health topics
- List of programme/activity
- List of countries

Timeline for publishing

The item will be published within one day. (one day notice between receiving and posting)

Number of documents

The review will include approximately 5/6 articles a month.