



Travel Health

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Chief Medical Officer Foreign and Commonwealth Office
Director National Travel Health Network and Centre

HEOPS Sept 2018

Protecting the health of the British traveller

- Develop national guidance
- Surveillance of hazards abroad
- Yellow Fever Programme
- Share information/expertise widely
- Collaborate with others sharing our aim
- Train health professionals to provide best quality, evidence-based advice
- Initiate research, collect and analyse data to help achieve goals

The screenshot displays the NaTHNaC website homepage. At the top is the NaTHNaC logo with a location pin icon. Below it is a navigation menu with links for HOME, ABOUT US, PRESS, and CONTACT. The main content area is titled "OUR SERVICES" and features six service cards:

- TRAVEL HEALTH PRO**: Travel health information aimed at healthcare professionals advising travellers, and people travelling overseas from the UK. News and information by country on vaccinations, infectious and non-infectious diseases, malaria prevention, disease outbreaks, and more.
- YELLOW FEVER VACCINATION PROGRAMME**: Clinical and administrative resources for healthcare professionals and other staff running or managing a Yellow Fever Vaccination Centre (YFVC). Also find out how to apply to become a YFVC.
- HEALTH PROFESSIONALS TELEPHONE ADVICE LINE**: Health professionals advising travellers with complex itineraries or specialist health needs can call weekdays to speak to one of NaTHNaC's specialist travel health nurses. Find opening hours, contact telephone number and more details.
- NATHNAC TRAINING PORTAL**: Health professionals can access booking information for online and classroom training in yellow fever vaccination, get guidance on how to gain experience in travel medicine and view a listing of forthcoming travel health courses and conferences.
- SEARCH FOR YELLOW FEVER VACCINATION CENTRES**: Search by location or postcode to find a centre offering yellow fever vaccination in England, Wales or Northern Ireland. YFVCs generally also offer a wider travel health service. Search also Scotland, Isle of Man and the Channel Islands.
- NEWS**: Including up-to-date news on worldwide disease outbreaks, malaria guidelines, yellow fever vaccine recommendations and certificate requirements, WHO announcements, changes in vaccine supplies, advice for important international events, and other travel-related health risks.

At the bottom of the page are logos for Public Health England, Department of Health, LSTM, University College London Hospitals NHS Foundation Trust, and the NHS logo.

Foreign and Commonwealth Office

- 274 diplomatic offices
- 169 countries and territories, 9 multilateral organisations
- 14 new posts since 2010
- 12,654 officers and family overseas
- 14,171 duty travellers

The screenshot shows the GOV.UK website for the Foreign and Commonwealth Office. The header includes the GOV.UK logo, a search bar, and navigation links for Departments, Worldwide, How government works, Get involved, Policies, Publications, Consultations, Statistics, and Announcements. The main content area features the Foreign & Commonwealth Office logo and a list of news items:

- 15 June 2018 — Press release**
Foreign Secretary & Naomi Campbell discuss girls' education
Boris Johnson meets Naomi Campbell to discuss his campaign to ensure the world's poorest girls get 12 years of quality education
- 15 June 2018 — Authored article**
The World Cup 'does not belong to Vladimir Putin' and an England boycott would only cheat fans: article by Boris Johnson
Writing in The Sun newspaper, the Foreign Secretary highlights cooperation between the UK and Russia ahead of the World Cup and continued concerns for the...
- 13 June 2018 — Press release**
UK responds to OPCW report on chemical attacks in Idlib, Syria
Minister for the Middle East Alistair Burt has issued a statement following a report by the OPCW that found evidence of chemical attacks in Idlib, Syria.
- 13 June 2018 — Press release**
Foreign Secretary statement on military action in Hodeidah
Foreign Secretary Boris Johnson calls for all parties to respect international humanitarian law and prioritise the protection of civilians.
- 12 June 2018 — Press release**
Foreign Secretary statement on US-DPRK leaders' summit, June 2018
Foreign Secretary Boris Johnson welcomes the constructive summit in Singapore between US President Trump and North Korean leader Kim Jong Un.
- 9 June 2018 — Speech**
PM statement at G7 summit: 9 June 2018
Prime Minister Theresa May gives a statement at the G7 summit in Canada.
- Latest**
Foreign Secretary welcomes extension of Afghan government ceasefire
published 16 June 2018 Press release
Kyrgyzstan Consular Fees
updated 16 June 2018 Guidance
Minister Mark Field's speech at Wilton Park conference on illegal wildlife trade
published 15 June 2018 Speech

At the bottom right, there are links to "Get updates to this list" via email and RSS feed, and a "See all" link.

Go to www.menti.com and use the code 41 39 53



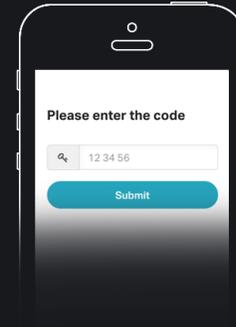
1

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2

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3

Enter the code 41 39 53 and vote!

What travel health issues are of concern to you?

By the end of this presentation ...you will be able to:

- Appreciate the role of travel medicine when supporting a global workforce (including students)
- Identify the key challenges facing the UK traveller
- Outline the expected developments in travel medicine in 2018 and beyond
- Access relevant information efficiently

Pre-travel

- Nick (48), freelance camera man travelling to Brazil for a natural history programme
- Assignment is for 2 weeks in Rio, filming on the island of Ilha Grande
- He is HIV positive with CD4 count of 300, viral load >100 copies/ml

While abroad

- Sarah (39), based in New Delhi with her husband who works for an NGO there
- His job requires travel throughout the country.
- She has recently found out she is pregnant
- This is her first pregnancy

On return

- Tariq, (60) is an outpatient manager
- He has just completed the Hajj
- He has been feeling unwell for four days but continued working
- His manager sends him to A&E with increasingly severe cough, shortness of breath and high fever.
- He has type 2 diabetes

The travel medicine continuum



Prevention
→
Contingency
planning

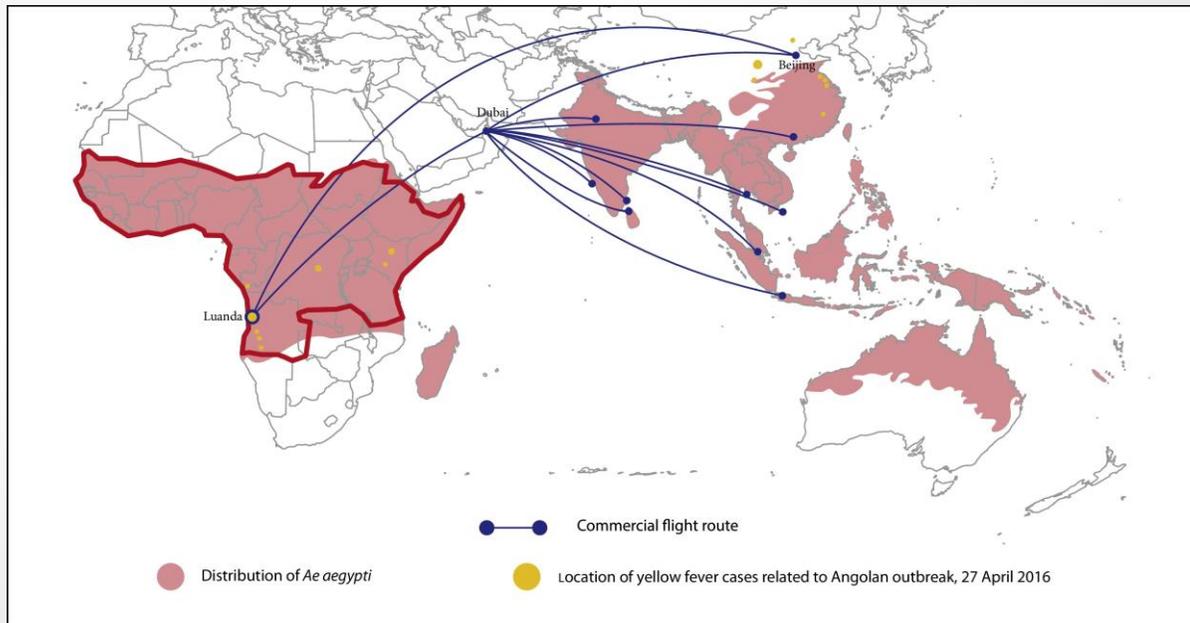
←
Treatment
←
Treatment



Why is travel medicine important for a global workforce?

- Exposure adverse health outcomes outside home country
- Importation of non-endemic diseases into country of origin
- Exportation non-endemic diseases to country of visit/work

Yellow fever – Angola outbreak



International Journal of Infectious Diseases 48 (2016) 98–103

Contents lists available at ScienceDirect

International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid

Review

Yellow fever cases in Asia: primed for an epidemic

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ARTICLE INFO

Article history:
 Received 27 April 2016
 Accepted 28 April 2016

Corresponding Editor: Eskild Petersen, Aarhus, Denmark.

Keywords:
 Yellow fever
Aedes aegypti
 Arboviruses
 Flaviviruses
 Emerging infectious diseases

SUMMARY

There is currently an emerging outbreak of yellow fever in Angola. Cases in infected travellers have been reported in a number of other African countries, as well as in China, representing the first ever documented cases of yellow fever in Asia. There is a large Chinese workforce in Angola, many of whom may be unvaccinated, increasing the risk of ongoing importation of yellow fever into Asia via busy commercial airline routes. Large parts of the region are hyperendemic for the related *Flavivirus dengue* and are widely infested by *Aedes aegypti*, the primary mosquito vector of urban yellow fever transmission. The combination of sustained introduction of viraemic travellers, an ecology conducive to local transmission, and an unimmunized population raises the possibility of a yellow fever epidemic in Asia. This represents a major global health threat, particularly in the context of a depleted emergency vaccine stockpile and untested surveillance systems in the region. In this review, the potential for a yellow fever outbreak in Asia is discussed with reference to the ecological and historical forces that have shaped global yellow fever epidemiology. The limitations of surveillance and vector control in the region are highlighted, and priorities for outbreak preparedness and response are suggested.

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1. A yellow fever outbreak emerges in Africa

On January 22, 2016, the internet-based disease outbreak reporting system of the International Society for Infectious Diseases – ProMED – posted an alert of 23 cases of yellow fever (YF) amongst locals, as well as Congolese and Eritreans, in a heavily populated suburb of Luanda, the Angolan capital.¹ This was based on an official Angolan Ministry of Health announcement. Three days later, the number of suspected cases had grown to 99 (28 confirmed), including eight deaths. On January 29, ProMED reported additional cases in southern Huila Province nearly 1000 km from Luanda.² Over the following weeks, a major urban YF epidemic unfolded in Angola, and by April 10, a total of 1751 suspected cases (582 laboratory-confirmed) with 242 deaths had been reported. The outbreak is widespread, involving 59 districts in 12 of the 18 provinces in the country, including the capital Luanda, which has recorded 406 confirmed cases. Three confirmed cases in neighbouring Democratic Republic of Congo

have been connected with the Angolan outbreak,³ and infected travellers have been reported in Kenya.⁴

Of major concern, the first YF cases have been reported in Asia, occurring in infected travellers from Angola. By April 10, 10 laboratory-confirmed cases had been imported into China, including six in Fujian Province, an area where dengue transmission has occurred.⁵ With a large expatriate Chinese community in Angola, it is likely that additional undetected cases may have been imported. If ongoing introduction of cases occurs in areas with a high density of the urban YF mosquito vector, *Aedes aegypti*, it is possible that local transmission could occur in China and potentially spread to Southeast Asia.

Approximately two billion people live in *Ae aegypti*-infested countries in Asia. The prospect of a YF introduction into this unvaccinated population poses a major global health threat. In this review, the potential for a YF outbreak in Asia is discussed in the context of the ecological and historical forces that have shaped global YF epidemiology. The aim is to draw attention to this emerging epidemic and to provide impetus for the necessary public health response.

PubMed was searched for papers written in English with the search terms “yellow fever” and “*Aedes aegypti*”, and all articles that focused on epidemiology, recent outbreaks, and control and

DOI of original article: <http://dx.doi.org/10.1016/j.ijid.2016.05.001>
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<http://dx.doi.org/10.1016/j.ijid.2016.04.025>
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Supporting a global workforce

- Degree of involvement will vary
- Responsibility doesn't stop at the airport
- Financial consequences of illness or injury
- Need an awareness of what is happening worldwide

Guidance on Health and Safety in Fieldwork

Including offsite visits and travel in the UK and overseas



Review

Protecting the health of medical students on international electives in low-resource settings

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Submitted 12 August 2017; Revised 18 October 2017; Editorial decision 20 November 2017; Accepted 22 November 2017

Abstract

Background: Increasingly, medical students from developed countries are undertaking international medical electives in developing countries. Medical students understand the many benefits of these electives, such as the opportunity to develop clinical skills, to gain insight into global health issues and to travel to interesting regions of the world. However, they may be much less aware of the risk to their health and wellbeing while abroad. Compounding this problem, medical students may not seek advice from travel medicine practitioners and often receive inadequate or no information from their medical school prior to departure.

Methods: The PubMed database was searched for relevant literature relating to the health of medical elective students. Combinations of the following key words were used as search terms: 'international health elective', 'medical student' and 'health risks'. Articles were restricted to those published in English from 1997 through June 2017. A secondary review of the reference lists of these articles was performed. The grey literature was also searched for relevant material.

Results: This narrative literature review outlines the risks of clinical electives in resource-poor settings which include exposure to infectious illness, trauma, sexual health problems, excessive sun exposure, mental health issues and crime. Medical students may mitigate these health risks by being informed and well prepared for high-risk situations. The authors provide evidence-based travel advice which aims to improve pre-travel preparation and maximize student traveller safety. A safer and more enjoyable elective may be achieved if students follow road safety advice, take personal safety measures, demonstrate cultural awareness, attend to their psychological wellbeing and avoid risk-taking behaviours.

Conclusion: This article may benefit global health educators, international elective coordinators and travel medicine practitioners. For students, a comprehensive elective checklist, an inventory of health kit items and useful web-based educational resources are provided to help prepare for electives abroad.

Key words: Student health, travel, international health elective, global health, medical education

Introduction

Global health and travel medicine are becoming increasingly important elements of undergraduate medical education,¹ but there is limited empirical research on the outcomes or risks associated with medical student travel. Each year an estimated 90%

of medical students from the UK undertake medical electives abroad, up to 40% of which will occur in developing countries.² Electives may be regarded as defined periods of clinical experience chosen by the student and often taken outside the country where they are studying. These electives provide opportunities

RESEARCH ARTICLE

Open Access

Health risks encountered by Dutch medical students during an elective in the tropics and the quality and comprehensiveness of pre-and post-travel care

Elhadi Sharafeldin^{1,2†}, Darius Soonawala^{1††}, Jan P Vandenbroucke², Evelien Hack³, Leo G Visser¹

Abstract

Background: Clinical and research electives abroad offer medical students many unique experiences. However, participating in an unfamiliar health-care setting combined with limited medical experience may place students at risk of illness. To improve pre-and post-travel care, we assessed the health risks and the quality and comprehensiveness of pre-and post-travel care in a cohort of Dutch medical students returning from an elective abroad.

Methods: All medical students who had performed an elective in the tropics between July 2006 and December 2008 were sent an informative email asking them to complete a web-based questionnaire.

Results: 180 of 242 (74%) students completed the questionnaire. Regarding the risk of bloodborne viral infection: 67% of all students and 32% of junior students engaged in procedures that constitute a risk of exposure to bloodborne viral infection, often in countries with high HIV prevalence rates. None of nine students who experienced possible or certain mucosal or percutaneous exposure to potentially infectious body fluids reported the exposure at the time it occurred and none used PEP. Regarding other health risks: 8 of 40 (20%) students stopped using mefloquine due to adverse effects. This left a sizeable proportion unprotected in countries that are hyperendemic for malaria. Post-travel screening for schistosomiasis, tuberculosis (tuberculin skin test) and carriage of methicillin-resistant *Staphylococcus aureus* (MRSA) encompassed approximately half of all students who should have been screened.

Conclusions: Based on the results of this study we have adopted an integral set of measures to reduce the health risks associated with an elective abroad. The pre and post-travel consult has been centralized and standardized as well as the distribution of PEP. In addition we have developed a mandatory module on Global Health for all medical students planning an elective abroad.

Background

Clinical and research electives abroad offer medical students many unique experiences. Shouldering responsibility in a different health care system and working with underserved patients broadens the personal and medical horizon. This may even influence future career choice as international medical experience is associated with an

increase in the choice for a primary care specialty [1]. A number of studies have surveyed the health risks facing students during an elective abroad and the pre-travel advice [2-9]. Particular regard has been given to the risk of bloodborne viral infection. For example, it is worrying that 75% of students fail to report exposures to potentially infectious body fluids [4].

Each year approximately 300 students enroll in the medical program at Leiden University Medical Center (LUMC) in The Netherlands. Approximately half of them perform one or more electives abroad. Unlike

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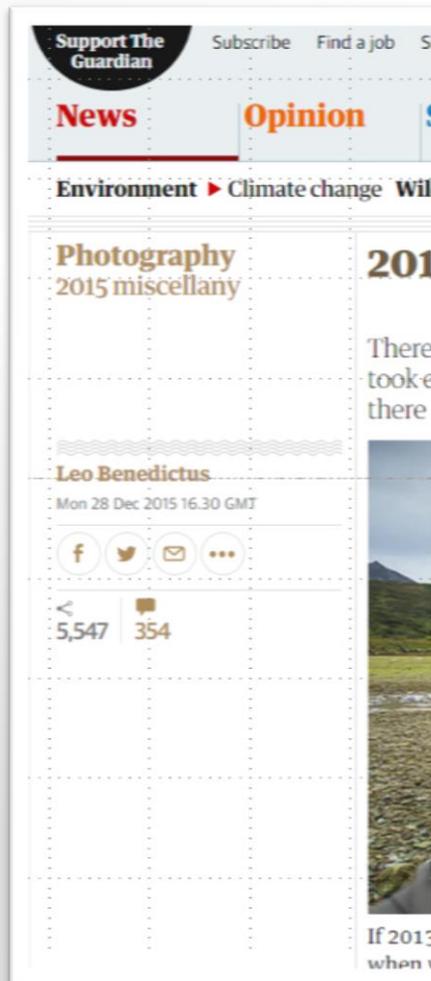
What are the challenges?

- Diverse group
- Occupational hazards
- Travel related hazards
- Limited evidence base
- Things can change rapidly
- Understanding and communicating risk

The travel medicine challenges

- Changing disease patterns in over 220 countries
- Preventive/therapeutic interventions change rapidly
- Rapid distribution of information or misinformation
- National and international guidelines differ
- Your workers are:
 - Travelling more and going to more exotic locales
 - Online, researching widely, talking to each other
 - Older, younger, have co-morbidities, immunosuppressed...

Their judgement can be poor..



JTM JOURNAL of TRAVEL MEDICINE  International Society of Travel Medicine *Journal of Travel Medicine*, 2016, 1-3 doi: 10.1093/jtm/ta026 Review

Review

The 'selfie' phenomenon: reducing the risk of harm while using smartphones during international travel

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Accepted 23 November 2015

Abstract

Background. Photography is an integral component of the international travel experience. Self-photography is becoming a mainstream behaviour in society and it has implications for the practice of travel medicine. Travellers who take selfies, including with the use of selfie sticks, may be subject to traumatic injuries associated with this activity. This review article is the first in the medical literature to address this emerging phenomenon.

Methods. Articles indexed on PubMed and Scopus databases through 2015 were retrieved, using the search terms 'travel', combined with 'selfie', 'self-photography', 'smartphone', 'mobile phone' and 'social media'. The reference lists of articles were manually searched for additional publications, and published media reports of travel-related self-photography were examined.

Results. The lack of situational awareness and temporary distraction inherent in selfie-taking exposes the traveller to potential hazards. A diverse group of selfie injuries has been reported, including injury and death secondary to selfie-related falls, attacks from wild animals, electrocution, lightning strikes, trauma at sporting events, road traffic and pedestrian accidents. Public health measures adopted by the Russian Federation in response to over 100 reported selfie injuries in 2015 alone are presented. The review also discusses the potential for direct trauma from the use of selfie sticks. Travel-related scenarios where selfies should be avoided include photographs taken from a height, on a bridge, in the vicinity of vehicular traffic, during thunderstorms, at sporting events, and where wild animals are in the background. Recommendations exist which discourage use of mobile phones in drivers and pedestrians.

Conclusions. The travel medicine practitioner should routinely counsel travellers about responsible self-photography during international travel and should include this advice in printed material given to the patient. The travel and mobile phone industries should reinforce these health promotion messages. Future research should offer greater insights into traveller selfie-taking behaviour.

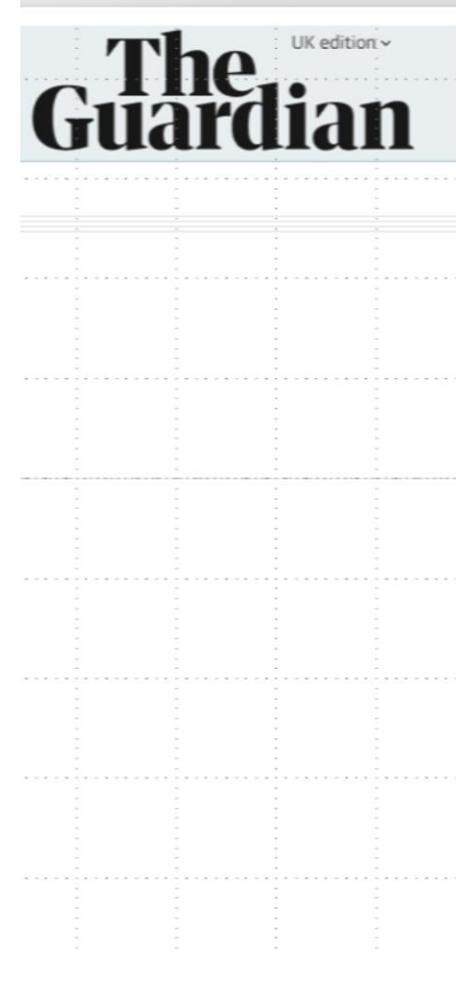
Key words: Selfie, smartphone, travel, injury, mobile phone, social media

Introduction

The use of smartphone technology pervades modern life and there are unquestionable benefits of smartphones in enhancing the international traveller's experience.¹ Smartphones enable travellers to maintain regular contact with family and friends through social media, to navigate with greater confidence using Global Positioning System technology and to improve their personal security in unfamiliar surroundings. Photography is an essential element of the travel experience and the posting of travel images on social media may act to inspire other travellers to visit the featured destinations. Self-photography using the forward-facing lens of a smartphone camera or webcam to take a 'selfie' has emerged as a novel phenomenon in recent years, which is particularly common in young adults.

It may be particularly appealing to travellers to photograph themselves against spectacular backdrops, possibly in precarious situations. The act of taking a selfie may temporarily reduce people's awareness of their immediate environment and expose

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Epidemiology of travel related illness or injury

- Exact nos. travellers to locations not known
- Cases of illness in difficult to ascertain
- Self-reported illness
- Traveller recruitment
- Specific diseases
- Tropical destinations
- Poor response rates
- Failure to control for possible confounders
- Even less information on those who travel for work

Aggregated data

- 100,000 travellers to developing country for 1 month:
 - 50,000 some health problem
 - 8,000 will see a physician
 - 5,000 will be confined to bed
 - 1,100 will be incapacitated in work
 - 300 will be admitted to hospital
 - 50 will be air evacuated
 - 1 will die



Journal of Travel Medicine, 2017, 1-8
doi: 10.1093/jtm/tax046
Review

International Society of Travel Medicine
Promoting healthy travel worldwide

Journal of Travel Medicine, 2017, 1-8
doi: 10.1093/jtm/tax046
Review

Review

What proportion of international travellers acquire a travel-related illness? A review of the literature

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Editorial decision 6 June 2017; Accepted 7 June 2017

Abstract

Introduction: As international travel increases, travellers may be at increased risk of acquiring infectious diseases not endemic in their home countries. Many journal articles and reference books related to travel medicine cite that between 22–64% of international travellers become ill during or after travel; however, this information is minimal, outdated and limited by poor generalizability. We aim to provide a current and more accurate estimate of the proportion of international travellers who acquire a travel-related illness.

Methods: We identified studies via PubMed or travel medicine experts, published between January 1, 1976–December 31, 2016 that included the number of international travellers acquiring a travel-related illness. We excluded studies that focused on a single disease or did not determine a rate based on the total number of travellers. We abstracted information on traveller demographics, trip specifics, study enrollment and follow-up and number of ill travellers and their illnesses.

Results: Of 743 studies, nine met the inclusion criteria. The data sources were from North America (four studies) and Europe (five studies). Most travellers were tourists, the most frequent destination regions were Asia and Africa, and the median trip duration ranged from 8–21 days. Six studies enrolled participants at the travellers' pre-travel consultation. All studies collected data through either extraction from the medical record, weekly diaries, or pre- and post-travel questionnaires. Data collection timeframes varied by study. Between 6–87% of travellers became ill across all studies. Four studies provided the best estimate: between 43–79% of travellers who frequently visited developing nations (e.g. India, Tanzania, and Kenya) became ill; travellers most frequently reported diarrhoea.

Conclusion: This is the most comprehensive assessment available on the proportion of international travellers that develop a travel-related illness. Additional cohort studies would provide needed data to more precisely determine the rates of illness in international travellers.

Keywords: International travel, travel, illness

Introduction

Projections suggest the annual number of international travellers will reach 1.8 billion by 2030. Europe remained the most common destination for international travellers in 2015, accommodating approximately 600 million arrivals, an increase of almost 5% from the previous year. However, travellers are increasingly visiting regions with emerging economies, and travel to Asia, Africa, Latin America and the Middle East is projected to rise in the coming years.¹ Of the top 10 international destinations in 2015 identified by the United Nations World Tourism Organization, four (China, Turkey, Mexico and the Russian Federation) were outside of the United States and Western

Published by Oxford University Press 2017. This work is written by US Government employees and is in the public domain in the US.

What are the considerations before travel?

**RISK
ASSESSMENT**

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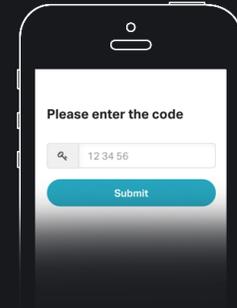
1

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2

Go to www.menti.com



3

Enter the code **41 39 53** and vote!

Which country did you travel to on your last overseas trip ?

Go to www.menti.com and use the code 41 39 53



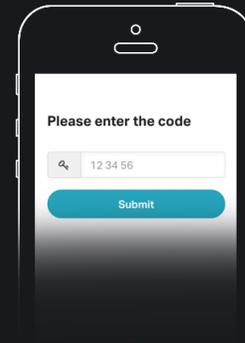
1

Grab your phone

www.menti.com

2

Go to www.menti.com



3

Enter the code 41 39 53 and vote!

On your last trip overseas, what do you think were your greatest health risks?

Pre-travel considerations

- Risks dependent on itinerary, duration and season of travel, purpose, lifestyle, and host characteristics
 - Destination
 - Individual
 - Occupational
 - Organisational
 - Fitness to travel and work overseas

Destination related factors

- Endemic diseases
- Environmental
- Infrastructure
- Remote or rural
- Civil unrest
- Etc.

VACCINE RECOMMENDATIONS

Details of vaccination recommendations and requirements are provided below.

All Travellers

Travellers should be up to date with routine vaccination courses and boosters as [recommended in the UK](#). These vaccinations include for example [measles-mumps-rubella \(MMR\)](#) vaccine and diphtheria-tetanus-polio vaccine.

Those who may be at increased risk of an infectious disease due to their work, lifestyle choice, or certain underlying health problems should be up to date with additional recommended vaccines. See the individual chapters of the 'Green Book' [Immunisation against infectious disease](#) for further details.

Certificate Requirements

- There are no certificate requirements under International Health Regulations.
- Due to an outbreak of yellow fever in Brazil 2017, country certificate requirements may be updated at short notice. Please check Pan American Health Organisation for [updated or additional requirements for the international certificate of vaccination or prophylaxis](#).
- There is a **risk of yellow fever** transmission in parts of Peru (see '[Some Travellers](#)' section below).

Most Travellers

The vaccines in this section are recommended for most travellers visiting this country. Information on these vaccines can be found by clicking on the blue arrow. Vaccines are listed alphabetically.

Hepatitis A	▼
Tetanus	▼

Some Travellers

The vaccines in this section are recommended for some travellers visiting this country. Information on when these vaccines should be considered can be found by clicking on the arrow. Vaccines are listed alphabetically.

Hepatitis B	▼
Rabies	▼
Tuberculosis (TB)	▼
Typhoid	▼
Yellow Fever	▼

MALARIA

Malaria is a serious illness caused by infection of red blood cells with a parasite called Plasmodium. The disease is transmitted by mosquitoes which predominantly feed at dusk and dawn.

Symptoms usually begin with a fever (high temperature) of 38°C (100°F) or more. Symptoms may include feeling cold and shivery, headache, nausea, vomiting and muscle aches. Symptoms may appear between eight days and one year after the infective bite.

Prompt diagnosis and treatment is required as people with malaria can die. Those at higher risk of malaria, or of severe complications from malaria, include women, infants and young children, the elderly, travellers who do not take prophylaxis and those visiting friends and relatives.

Prevention

Travellers should follow an ABCD guide to preventing malaria:

Awareness of the risk – Risk depends on the specific location, seasonal activities and type of accommodation.

Bite prevention – Travellers should take mosquito bite avoidance measures.

Chemoprophylaxis – Travellers should take antimalarials (malaria prevention tablets) appropriate for the area (see below). No antimalarials are 100% effective. A combination with mosquito bite avoidance measures will give the best protection against malaria.

Diagnosis – Travellers who develop a fever of 38°C [100°F] or higher, or who are being in a malaria risk area, or who develop any symptoms suggestive of malaria on return should seek immediate medical care. Emergency standby treatment should be considered for those going to remote areas with limited access to medical services.

Risk Areas

- There is a low risk of malaria in the Amazon basin of Peru along the coast, particularly in Loreto province and in the other rural areas of Peru. In that part of the Amazon Basin which borders Bolivia: **awareness of the risk** is recommended.
- There is no risk in the city of Lima and the coastal region south of Lima.

Special risk groups

In low risk areas, antimalarials may be considered in exceptional circumstances for those who are at higher risk of malaria (such as long term travellers visiting remote areas, those with severe complications from malaria (such as the elderly [over 70 years old], immunosuppressed, those with complex co-morbidities, pregnant women and children).

Travellers with an absent or poorly functioning spleen should be dissuaded from travelling to an area with risk of malaria, but where travel is essential awareness, rigorous bite avoidance and antimalarials should be advised.

In these circumstances, you may wish to seek specialist advice, although atovaquone OR doxycycline OR mefloquine would be suitable options except in rural areas of Peru above 2,000m including that part of the Amazon Basin which borders Bolivia where chloroquine would be a suitable option.

OTHER RISKS

There are some risks that are relevant to all travellers regardless of destination. These may for example include road traffic and other accidents, diseases transmitted by insects or ticks, diseases transmitted by contaminated food and water, sexually transmitted infections, or health issues related to the heat or cold. Some additional risks (which may be present in all or part of this country) are mentioned below and are presented alphabetically.

Altitude

There is a risk of altitude illness when travelling to destinations of 2,500 metres (8,200 feet) or higher. Important risk factors are the altitude gained, rate of ascent and sleeping altitude. Rapid ascent without a period of acclimatisation puts a traveller at higher risk.



Weather



Elevation

Area above 6,500 feet (2,000 meters)

Area below 6,500 feet (2,000 meters)

Administrative boundary (e.g. state, province, department)

between dawn and dusk. A small number of cases of sexual transmission of ZIKV have also been reported. Most people infected with ZIKV have no symptoms. When symptoms do occur they are usually mild and short-lived. Serious complications and deaths are not common. However, there is now scientific consensus that Zika virus is a cause of congenital Zika syndrome (microcephaly and other congenital anomalies) and Guillain-Barré syndrome.

Zika virus in Peru

This country is considered to have a **high risk of ZIKV transmission**. **Pregnant women are advised to postpone non-essential travel** until after pregnancy. Details of specific affected areas within this country are not available but the mosquitoes that transmit ZIKV are unlikely to be found above 2,000m altitude.

The map below shows areas which are above 2,000m and can be used by travellers and health professionals as a general guide to indicate potentially lower risk areas for mosquito-acquired ZIKV infection. Travellers whose itineraries are limited to areas above 2,000m are at a lower risk of acquiring ZIKV from a mosquito; however there may still be a risk of sexual transmission.

© NaTHNaC. Acknowledgement: ACMP

Individual factors

- Less experienced
- Pre-existing diseases
- Immune compromise
- Pregnancy
- Older travellers
- Migrant workers

Pre-existing conditions

- Effect of travel, environment, and common endemic diseases
- Adequacy of local/regional medical facilities
- Adequate supply of medication/equipment
- Efficacy of preventive measures
- Liaison with treating doctors
- Careful planning

Occupational factors

- Traditional occupational hazards
- Long hours, isolation, frequent travel
- Lack of normal infrastructure
- Security
- Psychosocial hazards
- Managing occupational risks in overseas context

Fitness to travel and work overseas

- Degree of detail varies according to risk
- Employer may impose specific requirements
- Destination may impose restrictions
- Job may have specific requirements
- Should take into account disability legislation
- Little data on how this should be done
- History has good utility

Greuters S et al. Evaluation of Repatriation Parameters: Does Medical History Matter? *J Trav Med* 2009

Moshe S et al. Comparison of three methods of pre-employment medical evaluations. *Occ Med* 2007

Mcloughlin DC et al. In-depth review - Aircrew periodic medical examinations. *Occ Med* 2003

Managing the outcome

- Very few absolute contraindications
- Are there any enabling options?
- Custom and practice may lead to excessive caution
- Decision may have to be based on organisational needs

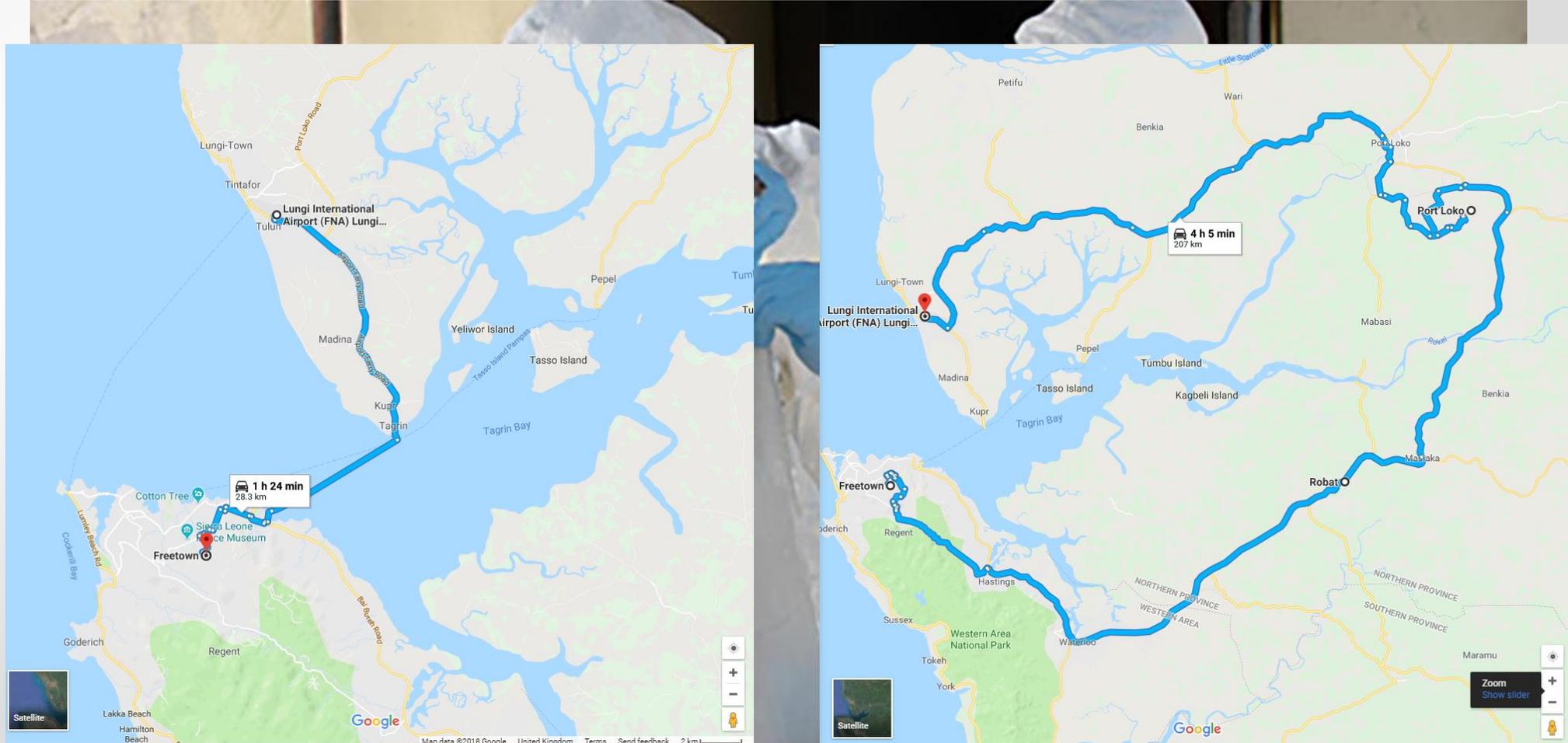
The travel clinic

- Traveller's diarrhoea
- Malaria chemoprophylaxis
- Insect vector avoidance
- Vaccine preventable disease
- Personal behavior & safety
- Traveller's access to medical care
- Other specialised advice
- Training

Support while overseas

- Health and dental care abroad
- Repatriation facilities
- Evacuation and disaster plans
- Occupational health and safety
- Employee assistance programme
- Monitoring events worldwide

Ebola - events can have unintended consequences



On return

- Significant illness, injury or exposure
- Caution for long-term assignees:
 - 75% reported difficulty adjusting on return
 - 33% disorientated, and 73% felt inadequately supported
 - 46% psychological difficulties (87% depression, 7% chronic fatigue, 4% PTSD)
- Screening of well travellers controversial

Exportation of diseases

M News ▶ UK News ▶ MERS

MERS: Hunt to trace plane passengers on same Manchester flight as man carrying deadly virus

The patient was diagnosed with Middle East Respiratory Syndrome after arriving at Manchester Airport on Saudi Arabian Airlines flight SV123 last week.

SHARE      21 SHARES  1 COMMENT

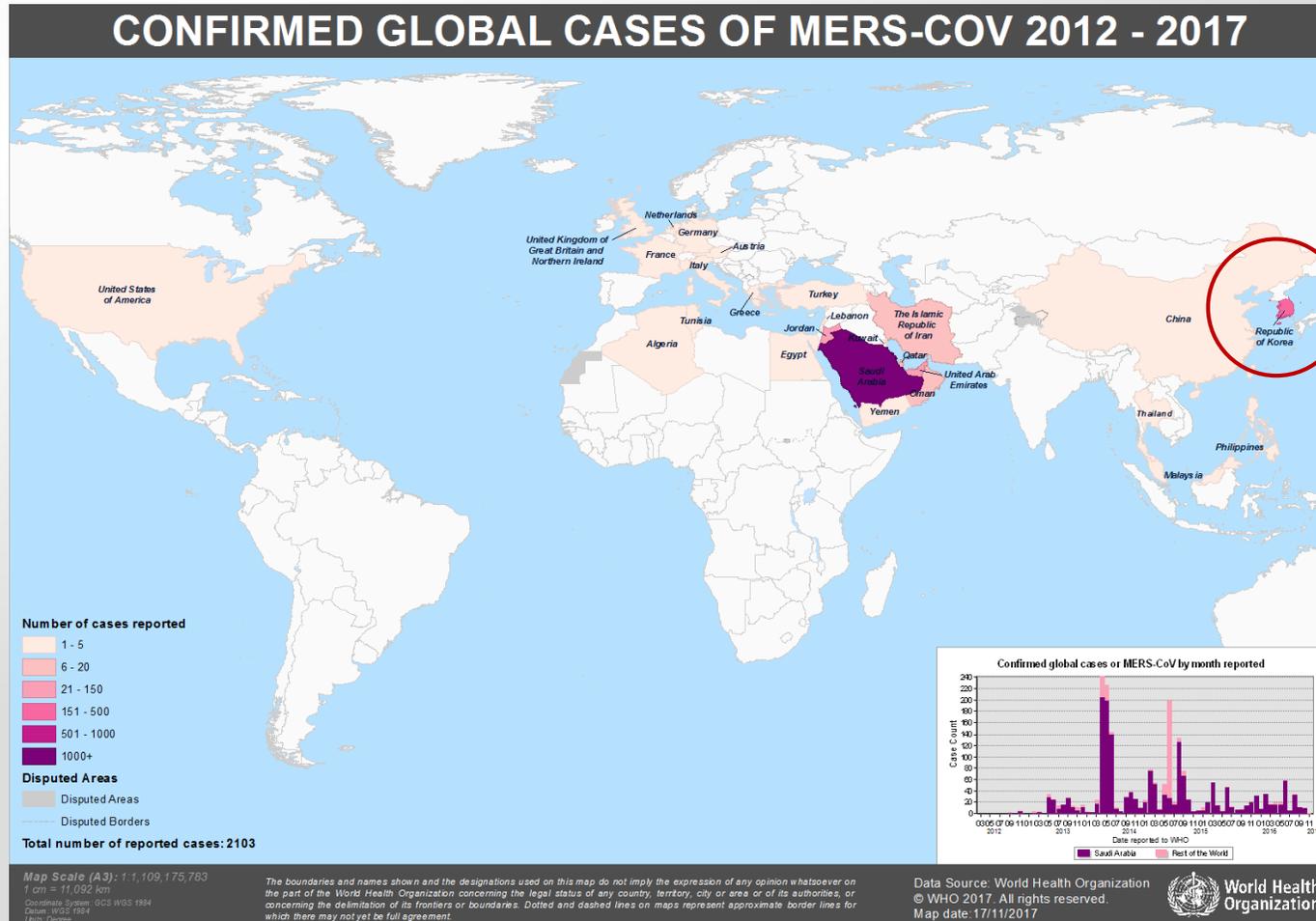
By **Chris Slater** & **Amy Coles**
09:11, 24 AUG 2018 | UPDATED 09:42, 24 AUG 2018

NEWS



A general view of Royal Liverpool University Hospital (Image: Getty Images Europe)

Exportation of diseases - MERS-CoV



Fitness to return to work

Articles

 **Late Ebola virus relapse causing meningoencephalitis: a case report**

Michael Jacobs, Alison Rodger, David J Bell, Sanjay Bhagani, Ian Cropley, Ana Filipe, Robert J Gifford, Susan Hopkins, Joseph Hughes, Fahah Jobe, Ingolfur Johannessen, Draso Karagoogopoulos, Angie Lackenby, Rebecca Lester, Rebecca S N Liu, Alisdair MacConnachie, Tabitha Mahungu, Daniel Martin, Neal Marshall, Stephen Mapham, Richard Orton, Massimo Palmairini, Monika Patel, Colin Perry, S Erica Peters, Duncan Porter, David Ritchie, Neil D Ritchie, R Andrew Seaton, Vattipally B Sreenu, Kate Templeton, Simon Warren, Gavin S Wilkie, Maria Zambon, Robin Gopal, Emma C Thomson

Summary
There are thousands of survivors of the 2014 Ebola outbreak in west Africa. Ebola virus can persist in survivors for months in immune-privileged sites; however, viral relapse causing life-threatening and potentially transmissible disease has not been described. We report a case of late relapse in a patient who had been treated for severe Ebola virus disease with high viral load (peak cycle threshold value 13·2).

Methods A 39-year-old female nurse from Scotland, who had assisted the humanitarian effort in Sierra Leone, had received intensive supportive treatment and experimental antiviral therapies, and had been discharged with undetectable Ebola virus RNA in peripheral blood. The patient was readmitted to hospital 9 months after discharge with symptoms of acute meningitis, and was found to have Ebola virus in cerebrospinal fluid (CSF). She was treated with supportive therapy and experimental antiviral drug GS-5734 (Gilead Sciences, San Francisco, Foster City, CA, USA). We monitored Ebola virus RNA in CSF and plasma, and sequenced the viral genome using an unbiased metagenomic approach.

Findings On admission, reverse transcriptase PCR identified Ebola virus RNA at a higher level in CSF (cycle threshold value 23·7) than plasma (31·3); infectious virus was only recovered from CSF. The patient developed progressive meningoencephalitis with cranial neuropathies and radicalopathy. Clinical recovery was associated with addition of high-dose corticosteroids during GS-5734 treatment. CSF Ebola virus RNA slowly declined and was undetectable following 14 days of treatment with GS-5734. Sequencing of plasma and CSF viral genome revealed only two non-coding changes compared with the original infecting virus.

Interpretation Our report shows that previously unanticipated, late, severe relapses of Ebola virus can occur, in this case in the CNS. This finding fundamentally redefines what is known about the natural history of Ebola virus infection. Vigilance should be maintained in the thousands of Ebola survivors for cases of relapsed infection. The potential for these cases to initiate new transmission chains is a serious public health concern.

Funding Royal Free London NHS Foundation Trust.

Introduction
There are thousands of survivors of the 2014 Ebola virus disease epidemic in west Africa.¹ Previous Ebola outbreaks were much smaller and occurred in resource-limited locations, so it would be unsurprising if the full range of complications has yet to be documented. However, the possibility of a late, severe clinical relapse of Ebola virus infection, with the potential for onward transmission, was not anticipated.

Here, we describe a case of late relapse in a patient who had been treated for severe Ebola virus disease with high viral load.

Patient history
initial admission (December, 2014, to January, 2015)
Pauline Cafferkey, a 39-year-old female nurse from Scotland, had assisted the humanitarian effort in Sierra Leone, where she provided direct patient care. After her return to Glasgow, UK, in December, 2014, the patient was diagnosed with Ebola virus disease; plasma Ebola virus RNA was detected by reverse transcriptase PCR (RT-PCR),² with a cycle threshold value of 24·8. She was transferred to the high-level isolation unit at the Royal Free Hospital, London, UK, on day 2 of her illness. She received intravenous fluid and electrolyte replacement, one dose of oral brincidofovir (200 mg), and two doses of convalescent plasma (300 mL) on consecutive days. Her clinical condition deteriorated over the next 3 days, with type 1 respiratory failure that required continuous positive airway pressure ventilation, erythroderma, mucositis, large volume diarrhoea, and agitation. Total parenteral nutrition was started through a central venous catheter. Plasma Ebola virus RNA peaked with a cycle threshold value of 13·2 on day 6. Monoclonal antibody therapy specific for Ebola virus glycoprotein (ZMAB,³ Public Health Agency of Canada, MB, Canada) was given (total dose 50 mg/kg) on days 5 and 8. Subsequently, plasma Ebola virus RNA declined and was lower than the

Background There are thousands of survivors of the 2014 Ebola outbreak in west Africa. Ebola virus can persist in survivors for months in immune-privileged sites; however, viral relapse causing life-threatening and potentially transmissible disease has not been described. We report a case of late relapse in a patient who had been treated for severe Ebola virus disease with high viral load (peak cycle threshold value 13·2).

Published Online
May 18, 2016
[http://dx.doi.org/10.1016/S0140-6736\(16\)01886-5](http://dx.doi.org/10.1016/S0140-6736(16)01886-5)

See Perspectives page 455

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‘.previously unanticipated, late, severe relapses of Ebola virus can occur.... The potential for these cases to initiate new transmission chains is a serious public health concern.’

Surveillance of events worldwide

OUTBREAK SURVEILLANCE

Outbreak Surveillance
Ongoing outbreaks

MEASLES IN MAURITIUS
05 Sep 2018
Mauritius

Between 18 March and 25 August 2018, a total of 808 confirmed measles cases, including three deaths have been reported. Two districts, Port Louis and Black River, have been the most affected. The other districts that have attained epidemic threshold are Pamplemousses, Plaines Wilhems and Grand Port. Prior to this outbreak the last case of measles was detected in Mauritius in 2009.

WHO - Read more

YELLOW FEVER IN DRC
05 Sep 2018
View Regions +

As of 24 August, 2018, samples from four out of five suspected cases have been confirmed for yellow fever. Cases have been reported from the provinces of Bas Uele, Tshuapa and Luabala.

WHO - Read more

LEPTOSPIROSIS IN INDIA
04 Sep 2018
Kerala, India

As of 3 September 2018, 1774 cases of leptospirosis have been reported in Kerala this year. There has been an increase since the recent floods in the area.

State - Read more

WEST NILE VIRUS IN GERMANY
04 Sep 2018
Lower Saxony, Germany

The German authorities have reported two cases of West Nile virus in great gray owls. This is the first time WNV has been identified in Germany. This is one of the most northerly reports in Europe of this virus.

DEFRA - Read more

POLIO IN PAPUA NEW GUINEA
03 Sep 2018
View Regions +

As of 2 September 2018, two new cases of polio were reported from Madang (date of onset 11 July) and Easten Highland (date of onset 26 July) provinces. There are now six cases in the country, following confirmation of four previously reported cases.

WHO - Read more

National Centre for Disease Control
(formerly National Institute of Communicable Diseases)

Directorate General of Health Services, Ministry of Health & Family Welfare
Government of India

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Home » Kerala Flood 2018

Kerala Flood 2018 Back

- District-wise Daily Report-Kerala State [95 KB]
- Letter to Kerala DHS on flood monitoring [250 KB]
- General guidelines for post flood surveillance [373 KB]
- Guidelines for Safe disposal of dead bodies [331 KB]
- Entomological Surveillance Guidelines [198 KB]
- NIC quick SMS service for communication [2996 KB]
- Advisory on Leptospirosis to flood affected states [697 KB]
- National Guidelines on Leptospirosis [1035 KB]

Technical Wings
National Health Programme
NCDC Branches
Administrative Wing
Resource/Digital Library
Conferences / Workshops / Seminars / Fellowships
Kerala Flood 2018
EIS Training Programme
Tender

EVENT CALENDAR

COUNTRY: ALL
DISEASE: ALL

TRAVEL HEALTH PRO

COUNTRY INFORMATION LATEST NEWS OUTBREAK SURVEILLANCE DISEASES IN BRIEF FACTSHEETS FROM A-Z WORLD OVERVIEW

Home / Latest News / South Africa – Malaria: updated risk areas and a...

29 Aug 2018

SOUTH AFRICA – MALARIA: UPDATED RISK AREAS AND ADVICE

The risk areas for malaria transmission in South Africa have been reviewed by the South African authorities resulting in changes to guidance for UK travellers



The National Department of Health and the South African Malaria Elimination Committee (SAMEC) has undertaken a review of their malaria guidelines; risk areas have been expanded in response to ongoing monitoring of malaria prevalence and distribution.



Public Health England (PHE) Advisory Committee for Malaria Prevention (ACMP) acknowledges this development and has updated recommendations for UK travellers to South Africa accordingly.

The malaria transmission areas in South Africa [page 13] are:

- North-eastern Kwazulu-Natal
- Low altitude areas of Mpumalanga (note expanded area of risk)
- Low altitude areas of Limpopo (note expanded area of risk)

Very rarely malaria is contracted in the North West (adjacent to the Molopo river) and Northern Cape (adjacent to the Orange river) (note expanded risk area).

Please refer to the [map provided by the Department of Health, Republic of South Africa](#) (page 13), for more detail on the risk areas for malaria transmission. This link is also provided on [TravelHealthPro South Africa: Country Information page](#).

In South Africa, mosquito bite precautions are recommended throughout the year for all risk areas. Malaria transmission typically occurs between the months of September to May, during which malaria chemoprophylaxis is recommended for some risk areas.

SEARCH NEWS FILTER

SEARCH

PERIOD: SIX MONTHS

COUNTRY: ALL

DISEASE: ALL

SEARCH

SEARCH NEWS BY TOPICS

A B C D E F G H I
J K L M N O P Q R
S T U V W X Y Z

VIEW FULL INDEX

TAG CLOUD

Insect bite avoidance Mosquito
Pregnancy ZIKV
Vaccination certificate
Sexual transmission Yellow fever
Malaria Vaccine Product supply
Legionella

Measles in Europe

TRAVEL HEALTH PRO COUNTRY INFORMATION LATEST NEWS OUTBREAK SURVEILLANCE DISEASES IN BRIEF FACTSHEETS FROM A-Z WORLD OVERVIEW

Home / Latest News / Measles in Europe reminder

27 Mar 2018
MEASLES IN EUROPE REMINDER

A reminder for travellers to mainland Europe to check they are up to date with measles vaccine



Search News filter

PERIOD: SIX MONTHS

COUNTRY: ALL

DISEASE: ALL

SEARCH

Search News by Topics

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J K L M N O P Q R
S T U V W X Y Z

VIEW FULL INDEX

Tag Cloud

Measles, Mumps, Rubella, Pregnancy, Zika, Vaccination certificate, Sexual transmission, Yellow fever, Malaria, Measles, Product supply, Legionella, Mosquito

Advice for travellers

If you are planning a seasonal break, as part of your travel preparation, make sure you are up-to-date with all currently recommended UK vaccines, including measles, mumps and rubella (MMR) vaccine. This is especially important if you are travelling to Europe, but is advised for all travellers, as increased measles cases are being reported internationally [1]. Two doses of MMR in a life time are needed for a person to be considered fully protected.

MMR vaccine can be given to babies from six months of age before travel to a risk country and/or where an outbreak is occurring [3].

If you have not had measles (the illness) or if you have never had two doses of MMR, you may be at risk if visiting countries reporting cases. This is especially a concern if staying with friends or family, mixing with the local population or going to mass gatherings like festivals, sports events or pilgrimages. Measles is easily passed from person to person and can be a serious illness in adults (as well as children). It is never too late to have the vaccine.

You may wish to consider carrying a record documenting vaccination against MMR when travelling abroad.

Travel Medicine and Infectious Disease (2015) 13, 10–18

Available online at www.sciencedirect.com

ScienceDirect

ELSEVIER journal homepage: www.elsevierhealth.com/journals/tmid

Measles associated with international travel in the region of the Americas, Australia and Europe, 2001–2013: A systematic review

M. Jost¹, D. Luzi¹, S. Metzler¹, B. Miran¹, M. Mutsch^{*}

Epidemiology, Biostatistics and Prevention Institute, Department of Public Health, Division of Infectious Diseases, University of Zurich, Zurich, Switzerland

Received 9 July 2014; received in revised form 11 October 2014; accepted 27 October 2014
Available online 6 November 2014

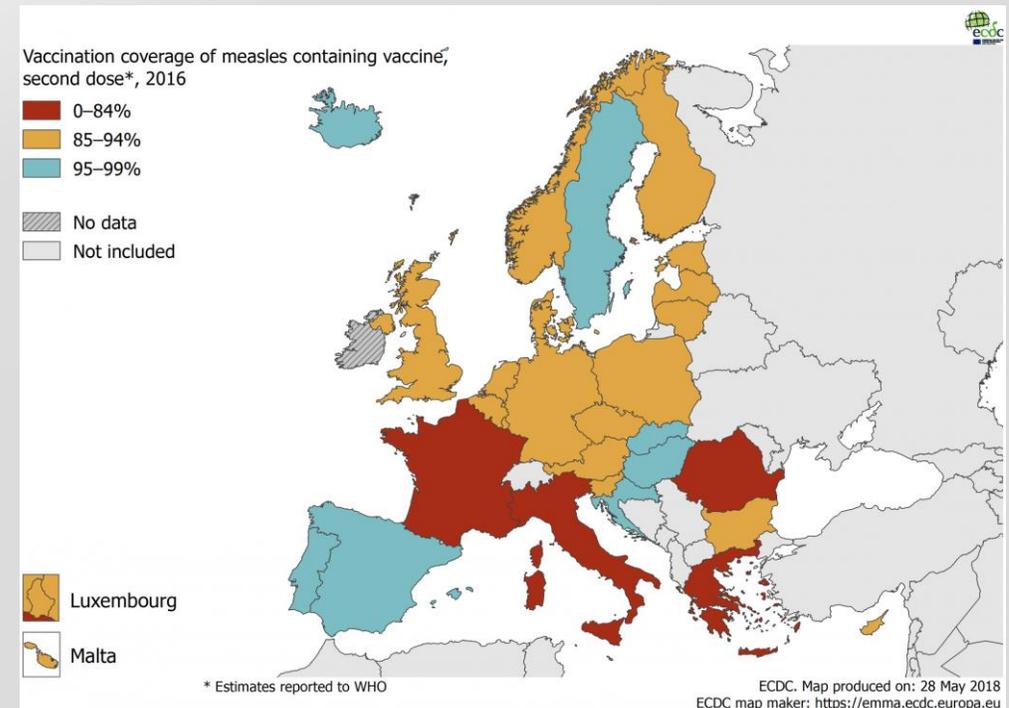
KEYWORDS
Measles;
Travel;
Importation;
Flight;
Mass gathering

Summary Background: Travel volumes are still increasing resulting in a more interconnected world and fostering the spread of infectious diseases. We aimed to evaluate the relevance of travel-related measles, a highly transmissible and vaccine-preventable disease.
Method: Between 2001 and 2013, surveillance and travel-related measles data were systematically reviewed according to the PRISMA guidelines with extraction of relevant articles from Medline, Embase, Google Scholar and from public health authorities in the Region of the Americas, Europe and Australia.
Results: From a total of 960 records 44 articles were included and they comprised 2128 imported measles cases between 2001 and 2011. The proportion of imported cases in Europe was low at 1–2%, which reflects the situation in a measles-endemic region. In contrast, imported and import-related measles accounted for up to 100% of all cases in regions with interrupted endemic measles transmission. Eleven air-travel related reports described 132 measles index cases leading to 47 secondary cases. Secondary transmission was significantly more likely to occur if the index case was younger or when there were multiple infectious cases on board. Further spread to health care settings was found. Measles cases associated with cruise ship travel or mass gatherings were sporadically observed.

^{*} Corresponding author. University of Zurich, Epidemiology, Biostatistics and Prevention Institute, Hirschengraben 84, CH-8001 Zurich, Switzerland. Tel.: +41 44 634 4857; fax: +41 44 634 4986.
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¹ Contributed equally. This article originated from the students' training course in Public Health of Infectious Diseases at the University of Zurich, fall semester, 2013.

<http://dx.doi.org/10.1016/j.tmaid.2014.10.022>
1477-8939/© 2014 Elsevier Ltd. All rights reserved.



<https://travelhealthpro.org.uk/news/308/measles-in-europe-reminder>

Jost ML et al. Measles associated with international travel in the region of the Americas, Australia and Europe, 2001–2013: A systematic review. *Travel Medicine and Infectious Disease* 2014

<https://ecdc.europa.eu/en/publications-data/vaccination-coverage-second-dose-measles-containing-vaccine-country-2016-who-6>

Polio – the en

This Week

Polio this week as of 19 June 2018
the border. World leaders reaffirm
not to be eradicated. Polio is

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WHERE WE WOR

Polio remains endemic in tr
Afghanistan, Nigeria and Pa
transmission is interrupted
countries remain at risk of i
especially vulnerable count
health and immunization se
trade links to endemic coun

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POLIO

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data, as we

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June 20



The Globa

POLIO IN PAPUA NEW GUINEA

25 Jun 2018

Morobe, Papua New Guinea

As of 25 June 2018, a confirmed case of vaccine derived poliovirus type 1 (VDPV1) has been reported. Additionally, VDPV1 has been isolated in specimens from two healthy children in the same community.



WHO - Read more



CVDPV2 IN NIGERIA

12 Jun 2018

Jigawa, Nigeria

As of 1 June 2018, a case of circulating vaccine-derived poliovirus type 2 (cVDPV2) has been reported in Kaugama district, Jigawa state.



WHO - Read more



CVDPV3 IN SOMALIA

27 Apr 2018

Banadir, Somalia

As of 24 April 2018, circulating vaccine-derived poliovirus type 3 (cVDPV3) has been confirmed in four environmental samples collected in March 2018. This follows confirmation of circulating vaccine-derived poliovirus type 2 (cVDPV2) in environmental samples from Mogadishu in February 2018.



WHO - Read more



CVDPV2 IN KENYA

20 Apr 2018

Kenya

As of 17 April 2018, notification of a circulating vaccine-derived poliovirus type 2 (cVDPV2) detected from an environmental sample, has been confirmed. This is linked to the cVDPV2 confirmed from Somalia in March 2018. No cases of paralysis associated with this virus have been detected in either country.



WHO - Read more



CVDPV2 IN DRC

20 Feb 2018

View Regions +

On 13 February 2018, the Ministry of Health of the Democratic Republic of Congo declared that the ongoing outbreak of circulating vaccine-derived poliovirus type 2 (cVDPV2) is a national public health emergency. A total of 21 children with acute flaccid paralysis have tested positive since February 2017. Onset of paralysis in the last case was 3 December 2017.



WHO - Read more



POLIO IN PORTUGAL EX CAPE VERDE

13 Feb 2018

Cape Verde

On 10 February 2018, isolation of polio virus type 1 in a baby from Cape Verde who was medically evacuated to Portugal in November 2017 was reported. Oral polio and hepatitis B vaccines were given at birth and BCG on second day of life. No further vaccines were given as severe immunodeficiency was diagnosed. Investigations have confirmed this as isolated poliovirus related to Sabin type 1 vaccine virus in a severely immunocompromised infant.



ECDC - Read more



CVDPV2 IN SYRIA

29 Nov 2017

View Regions +

As of 21 November, 2017 seven new cases of circulating vaccine-derived poliovirus type-2 (cVDPV2) were reported in the last week. All cases were from Deir Ez-Zor governorate. The total number of cVDPV2 cases in this outbreak is 70 (67 in Deir Ez-Zor, 2 in Raqqa and 1 in Homs governorates).



WHO - Read more



PERIOD

LAST YEAR

COUNTRY

ALL

DISEASE

ALL

SEARCH

Tag Cloud

- Insect bite avoidance
- Mosquito
- Pregnancy
- ZIKV
- Vaccination certificate
- Sexual transmission
- Yellow fever
- Malaria
- Vaccine
- Product supply
- Legionella

and available

s – as of 22



ADICATION INITIATIVE

World Health Organization (WHO), Rotary International, the US Centers for Bill & Melinda Gates Foundation. Its goal is to eradicate polio worldwide.

Yellow fever

World Health Organization

English

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17 MAY 2013 | GENEVA - The yellow fever after the initial vaccination is not necessary published in WHO's Weekly Epidemiologic Organization's Strategic Advisory Group of reviewed the latest evidence and conclude sufficient to confer life-long immunity again

Since yellow fever vaccination began in the fever post-vaccination have been identified dispensed. Evidence showed that among all cases developed the disease within five demonstrates that immunity does not decrease

Important news for yellow fever ender

"The conventional guidance has been that be boosted after ten years," says Dr Helen I very good evidence. It was quite clear to SF fever vaccine is effective. This is extremely fever is endemic, because it will allow them scheduling. It is also important for travellers

Yellow fever is an acute viral haemorrhagic mosquitoes that is endemic to 44 countries Americas. Infection with the yellow fever virus from mild symptoms to severe illness with outcomes.

Estimated 200 000 new cases each year

There are an estimated 200 000 cases of 15% of people infected with yellow fever die and up to half of those will die, as there is aimed simply at reducing patients' discomfort

The vast majority of reported cases and deaths are in endemic regions of Africa, yellow fever risk, putting children at highest risk of infection. 1 of yellow fever cases worldwide has increased immunity to infection, deforestation, urban climate change.

Vaccination is the most effective means

Vaccination is considered to be the most effective means of preventing yellow fever. Protective immunity develops after receiving the vaccination. For routine immunization of the 44 yellow-fever endemic countries

SAGE is the principal advisory group to WHO charged with advising WHO on overall global from vaccines and technology, research an immunization and its linkages with other health with all vaccine-preventable diseases include immunization.

For more information please contact:
Fadela Chaib
Communications Officer/Spokesperson
Telephone: +41 22 791 32 28
Mobile: +41 79 475 55 56
E-mail: chaib@who.int

Amendments

Term of protection related

Yellow fever is a condition of protection, which is not

In May 2014, Experts on immunization met to update and

The amendments legally binding

In the context of the validity of the 2005, from 11 July of yellow fever entry into a State vaccination

This lifetime vaccination, as

¹ The main IHR (2005) into WHO
² Meeting of the Strategic Advisory Group of Experts (SAGE) on Immunization (2011)
³ Resolution WHA67.13

Visa Application

Please read the entitlements to a Ghanaian Visa carefully

Requirement Checklist

Prohibited Immigrants

Inoculations

Yellow fever vaccination requirement for travellers across the frontiers of Ghana

Yellow fever is an acute viral infection transmitted by the Aedes Aegypti mosquitoes. It is endemic and epidemic in several countries in Africa, South America and Caribbean Islands. Case fatality rate is high in classic yellow fever epidemics. There is no curative medical treatment but however highly preventable by vaccination.

In accordance with the International Health Regulations IHR2005 which involves the below:

- Article 36 (Certification of vaccination or other prophylaxis)
- Annex 6 (Vaccination, prophylaxis and related certificates)
- Annex 7 (Requirements concerning vaccination or prophylaxis for specific diseases)

All travellers above nine (9) months old coming into Ghana are required to have been vaccinated against Yellow fever at least Ten days before the proposed date of travel and where already vaccinated the duration of the vaccination status should not be more than Ten years before entering Ghana.

Ghana is one of the countries at the risk of Yellow Fever transmission, hence the need for all travellers (including those coming from countries with no risk to yellow fever) to Ghana to have a valid yellow fever vaccination certificate or records indicating their protection from yellow fever.

As a result, Health officials at all ports of entry carry out vigorous checks on travel documents with respect to Yellow fever vaccination certificates in accordance with Article 36 and Annex 6 as depicted above.

Fees

Payment Methods

Refund Policy

Processing Period

Exempted Countries

Gratis Visas

Validity Period

I have read and understood the terms and conditions

Proceed With Visa Application

Back

Journal of Travel Medicine, 2016, 1-5
doi: 10.1093/jtm/taw035
Original article



Requirements for the International Certificate of Vaccination or Prophylaxis (ICVP) with proof of vaccination against yellow fever Countries in the Americas, as of 22 March 2017

Obtains information from national authorities about changes of the requirements

Regulations (IHR), amended pursuant to Resolution WHA67.13, a single dose of yellow fever vaccine is sufficient to confer protection against yellow fever disease^{1,2,3}

Date information provided by country	Requirements for the International Certificate of Vaccination or Prophylaxis (ICVP) with proof of vaccination against yellow fever		Timeframe of the implementation of the requirements	Additional information provided by national authorities
	AT ENTRY applying to travellers ARRIVING in the country/territory	AT EXIT applying to travellers DEPARTING from the country/territory		
February 2017	Yes - For travellers, over 1 year of age, from countries/territories at risk for yellow fever transmission; - Exempted travellers in transit in the country/territory - Exempted travellers who have transited in through an airport in a country/territory at risk for yellow fever transmission	No	Current	- Designated yellow fever vaccination centres issuing ICVP: St John's Health Centre

Date information provided by country	Requirements for the International Certificate of Vaccination or Prophylaxis (ICVP) with proof of vaccination against yellow fever		Timeframe of the implementation of the requirements	Additional information provided by national authorities
	AT ENTRY applying to travellers ARRIVING in the country/territory	AT EXIT applying to travellers DEPARTING from the country/territory		
February 2017	No	No	Current	- National recommendations for international travellers: http://www.msal.gov.uy/visados/index.php?option=com_content&view=article&id=299&Itemid=30 - Designated yellow fever vaccination centres issuing ICVP: http://www.msal.gov.uy/visados/index.php?option=com_content&view=article&id=299&Itemid=30
February 2017	Yes - For travellers, over 1 year of age, from countries/territories at risk for yellow fever transmission - Including travellers in transit in the country/territory - Including travellers having transited for more than 12 hours through an airport in a country/territory at risk for yellow fever transmission	No	Current	- Designated yellow fever vaccination centres issuing ICVP: Travellers Clinic at Blue Hill Road Clinic, Nassau; The Grand Hospital Freeport, Grand Bahama

Brazil....

TRAVEL HEALTH PRO COUNTRY INFORMATION LATEST NEWS OUTBREAK SURVEILLANCE DISEASE IN BR

Home / Latest News / **Yellow fever cases in travellers: Update**

15 Mar 2018

YELLOW FEVER CASES IN TRAVELLERS: UPDATE

Cases of yellow fever in unvaccinated travellers who visited risk areas in Brazil continue to be reported



- This updates the previous report of [Yellow fever cases in travellers 27 February](#).

Further to the [cases previously reported in unvaccinated returned travellers](#) who had visited Brazil from the Netherlands, France, Argentina and Chile, two additional cases have been reported in travellers from Romania and Switzerland. These cases had travelled in Brazil including Ilha Grande in the municipality of Angra do Reis in the state of Rio de Janeiro where monkey and human cases have recently been reported [1]. On 15 March 2018, a case of yellow fever was reported in England in a traveller who had returned from Brazil [2,3].

A total of 11 cases of yellow fever have now been reported in unvaccinated travellers who had visited Brazil since the start of 2018 [3]. This represents an increase in cases in travellers who visited areas where yellow fever transmission is reported compared to previous years. Five cases were reported in unvaccinated travellers from Europe and USA between August 2016 and March 2017. Of these cases three were contracted in Peru, one case in Bolivia and one in Suriname [4,5]. Between 1970 and 2015, a total of 10 cases were reported in unvaccinated travellers from Europe and USA (five cases were contracted in South America and five in Africa) [6].

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Morbidity and Mortality Weekly Report (MMWR)

CDC - MMWR

Fatal Yellow Fever in Travelers to Brazil, 2018

Weekly / March 23, 2018 / 67(11):340-341

Format: Select One

On March 16, 2018, this report was posted online as an MMWR Early Release.

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[View suggested citation](#)

Yellow fever virus is a mosquito-borne flavivirus that causes yellow fever, an acute infectious disease that occurs in South America and sub-Saharan Africa. Most patients with yellow fever are asymptomatic, but among the 15% who develop severe illness, the case fatality rate is 20%–60%. Effective live-attenuated virus vaccines are available that protect against yellow fever (1). An outbreak of yellow fever began in Brazil in December 2016; since July 2017, cases in both humans and nonhuman primates have been reported from the states of São Paulo, Minas Gerais, and Rio de Janeiro, including cases occurring near large urban centers in these states (2). On January 16, 2018, the World Health Organization updated yellow fever vaccination recommendations for Brazil to include all persons traveling to or living in Espírito Santo, São Paulo, and Rio de Janeiro states, and certain cities in Bahia state, in addition to areas where vaccination had been recommended before the recent outbreak (3). Since January 2018, 10 travel-related cases of yellow fever, including four deaths, have been reported in international travelers returning from Brazil. None of the 10 travelers had received yellow fever vaccination.

Five of the 10 cases were reported by ProMED since January 15, including two from Argentina and three from Chile; two of the travelers from Chile died. In addition, during January 1–March 15, 2018, five confirmed cases of yellow fever in unvaccinated travelers returning from Brazil were reported by GeoSentinel (<http://www.jsttm.org/geosentinel/>), the global clinician-based sentinel surveillance system for travel-related illness among international travelers and migrants (4). These five yellow fever cases represent the first such cases identified by GeoSentinel (Table), which was initiated in 1995 by the International Society of Travel Medicine with support from CDC and now consists of 70 specialized travel and tropical medicine clinical sites around the world. The first of the GeoSentinel-reported cases occurred in a Dutch man aged 46 years who traveled to São Paulo state for 3 weeks during December 2017–January 2018. The second case occurred in a French woman, aged 42 years, who traveled to Minas Gerais state in Brazil for 4 weeks during December 2017–January 2018. She received a diagnosis of yellow fever in Brazil and was examined at a GeoSentinel site after returning to France to convalesce. The third and fourth cases occurred in a Romanian man, aged 34 years, and a Swiss man, aged 44 years, each of whom visited Brazil for approximately 2 weeks in February 2018. The fifth case was in a German man, aged 33 years, who spent a week in Brazil in late February. The Swiss and German travelers died from their illness (Table).

Among the 10 international travelers reported with yellow fever acquired in Brazil, eight acquired the disease on Ilha Grande, a forested island off the Rio de Janeiro coast, where one human and one nonhuman primate yellow fever case were reported in early February 2018 (5); of the eight patients who acquired the disease on Ilha Grande, four died. Another travel-related case of yellow fever was reported recently outside of Brazil (6).

Yellow fever is a potentially fatal illness that is preventable by vaccination. Yellow fever vaccination is recommended for all eligible persons aged ≥9 months, traveling to many areas in Brazil, including the states of São Paulo and Rio de Janeiro (especially Ilha Grande). Unvaccinated travelers should avoid traveling to areas where vaccination is recommended (<https://www.cdc.gov/travel/notifications/>). Travelers planning to visit areas in Brazil or elsewhere where yellow fever transmission is occurring should receive yellow fever vaccine at least 10 days before travel and follow recommendations for avoiding mosquito bites (<https://www.cdc.gov/yellowfever/prevention/index.html>). The Food and Drug Administration–approved yellow fever vaccine, YF-VAX, is currently unavailable in the United States because of manufacturing difficulties (7). An alternative yellow fever vaccine, Stamaril, is available through a limited number of U.S. yellow fever vaccination clinics. U.S. travelers should therefore plan ahead to obtain Stamaril because it might take more time to access one of these clinics. Clinicians assessing returning travelers should be aware of yellow fever signs and symptoms and maintain vigilance regarding the possibility of yellow fever exposure in travelers returning from Brazil or other areas with ongoing transmission of yellow fever.

Acknowledgments

Marion Koopmans, Department of Viroscience, Erasmus MC, Rotterdam, Netherlands; Ana Maria Bispo de Filippis, Laboratório de Flavivírus do Instituto Oswaldo Cruz, Rio de Janeiro, Brazil; Cornelia Svetlana Ceișanu, Ani Ioana Cotar, Laboratory for Vector-Borne Infections, Cantacuzino National Institute for Research, Bucharest, Romania; Mike Jacobs, Royal Free Hospital, London, United Kingdom; Eleni Nastouli, University College London Hospitals, London, United Kingdom; Andrew Simpson, Rare and Imported Pathogens Laboratory, Public Health England, Wiltshire, United Kingdom; Institute of Intensive Care and Division of Infectious Diseases, University Hospital Zurich, Switzerland; Alexandra Triola, Institute of Medical Virology, University of Zurich, Switzerland; Laurent Kaiser, Virology Laboratory, University Hospital Geneva, Switzerland.

Conflict of Interest

No conflicts of interest were reported.

https://ecdc.europa.eu/sites/portal/files/images/Brazil_YellowFever_AffectedStates_Auto_4.png
<https://www.cdc.gov/mmwr/volumes/67/wr/mm6711e1.htm>

Vaccine supplies – a global problem

The screenshot shows the TravelHealthPro website. At the top, there are navigation tabs: COUNTRY INFORMATION, LATEST NEWS, OUTBREAK SURVEILLANCE, DISEASES IN BRIEF, FACTSHEETS FROM A-Z, and WORLD OVERVIEW. The main heading is "VACCINE SUPPLY, SHORTAGES AND USE OF UNLICENSED MEDICINES". Below this, there is a sub-heading "Vaccine shortages" and a paragraph explaining that shortages occur from time to time for various reasons. There is also a section for "Sources of information on the use of vaccines" and a "Tag Cloud" at the bottom.

The screenshot shows the Public Health England website. The logo and name "Public Health England" are at the top. Below it, the tagline "Protecting and improving the nation's health" is visible. The main heading is "Plan for phased re-introduction of hepatitis B vaccine for lower priority groups in 2018". The background of the page is a dark red color.

The screenshot shows the CDC MMWR report titled "Addressing a Yellow Fever Vaccine Shortage – United States, 2016–2017". The report is dated May 5, 2017. It discusses a manufacturing problem that led to a shortage of yellow fever vaccine in the United States. The report mentions that the Food and Drug Administration (FDA) and Sanofi Pasteur are collaborating to ensure a continuous supply. It also notes that an alternative vaccine, Stanaril, is being used in the United States. The report includes a "What is already known about this topic?" section and a "What are the implications for public health?" section.

<https://travelhealthpro.org.uk/factsheet/67/vaccine-supply-shortages-and-use-of-unlicensed-medicines>

Gershman MD et al. Addressing a Yellow Fever Vaccine Shortage — United States, 2016–2017. MMWR Morb Mortal Wkly Rep 2017

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683830/Plan_for_phased_re-introduction_of_hepatitis_B_vaccine_for_lower_priority_groups_2018_.pdf

Antimicrobial resistance (AMR)

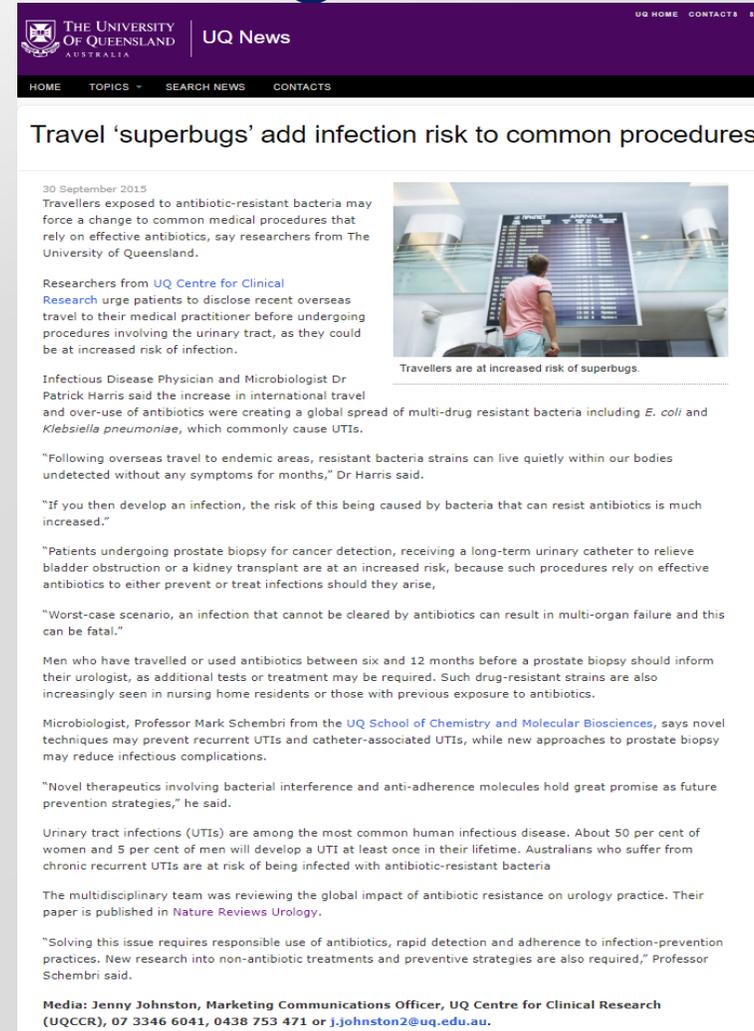
- International travel may contribute to emergence and spread of AMR
- Extent largely unknown
- Resistant Enterobacteriaceae most important in travellers' diarrhoea - high colonisation rates in travellers
- But AMR also includes malaria, giardiasis, MDRTB and XDRTB



The screenshot shows a news article from ABC News. The headline is "UK man's super-gonorrhoea cured — but now two Australians have it". The article is dated 21 Apr 2018, 4:47am. The main text describes a case of multi-drug resistant gonorrhoea in a UK man who was cured with a combination of antibiotics, but two similar cases have been reported in Australia. A photograph shows a colourised scanning electron micrograph of neisseria gonorrhoeae bacteria. The article also mentions that the infection was eventually successfully treated with another antibiotic, ertapenem, and that investigations have revealed there has been no further spread of this infection within the UK. PHE said efforts to contact the partner in South-East Asia were ongoing. The article concludes that cases in Queensland, Western Australia 'will be challenging' and that these latest cases and the recent one in the UK appear to be the first reported that are resistant to all of the antibiotics that have been in routine use against gonorrhoea. A quote from PHE's chief medical officer Professor Brendan Murphy states: "These latest cases and [the] recent one in the UK appear to be the first reported that are resistant to all of the antibiotics that have been in routine use against gonorrhoea," Professor Murphy said. The article also mentions that the Australians' infections have so far been resistant to ceftriaxone, azithromycin, ciprofloxacin, penicillin and tetracycline, according to PHE. A quote from PHE states: "These cases will be challenging for healthcare professionals to manage," PHE said. The article ends with a note that one of the Australians is believed to have caught the infection having sex in South-East Asia, while the other has not recently travelled overseas, PHE said. A small image shows a hand holding a condom. A caption below it reads: "The last thing you want to think about when you're getting up".

AMR what should we be advising travellers?

- Raising awareness
- Hand-washing/hand hygiene during travel
- Limiting antibiotic use
- Recommending appropriate vaccines
- Judicious use of antibiotics
- Avoid inappropriate and sub-optimal anti-pathogen therapies



The screenshot shows a news article from The University of Queensland (UQ) News. The article is titled "Travel 'superbugs' add infection risk to common procedures" and is dated 30 September 2015. The article discusses the risk of antibiotic-resistant bacteria (superbugs) to travellers and the impact on common medical procedures. It includes quotes from Dr. Patrick Harris, an Infectious Disease Physician and Microbiologist, and Professor Mark Schembri, a Microbiologist. The article also mentions that the multidisciplinary team is reviewing the global impact of antibiotic resistance on urology practice and that their paper is published in *Nature Reviews Urology*. The article concludes with a media contact for Jenny Johnston, Marketing Communications Officer, UQ Centre for Clinical Research (UQCCR).

THE UNIVERSITY OF QUEENSLAND AUSTRALIA | UQ News

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Travel 'superbugs' add infection risk to common procedures

30 September 2015

Travellers exposed to antibiotic-resistant bacteria may force a change to common medical procedures that rely on effective antibiotics, say researchers from The University of Queensland.

Researchers from **UQ Centre for Clinical Research** urge patients to disclose recent overseas travel to their medical practitioner before undergoing procedures involving the urinary tract, as they could be at increased risk of infection.



Travellers are at increased risk of superbugs.

Infectious Disease Physician and Microbiologist Dr Patrick Harris said the increase in international travel and over-use of antibiotics were creating a global spread of multi-drug resistant bacteria including *E. coli* and *Klebsiella pneumoniae*, which commonly cause UTIs.

"Following overseas travel to endemic areas, resistant bacteria strains can live quietly within our bodies undetected without any symptoms for months," Dr Harris said.

"If you then develop an infection, the risk of this being caused by bacteria that can resist antibiotics is much increased."

"Patients undergoing prostate biopsy for cancer detection, receiving a long-term urinary catheter to relieve bladder obstruction or a kidney transplant are at an increased risk, because such procedures rely on effective antibiotics to either prevent or treat infections should they arise,

"Worst-case scenario, an infection that cannot be cleared by antibiotics can result in multi-organ failure and this can be fatal."

Men who have travelled or used antibiotics between six and 12 months before a prostate biopsy should inform their urologist, as additional tests or treatment may be required. Such drug-resistant strains are also increasingly seen in nursing home residents or those with previous exposure to antibiotics.

Microbiologist, Professor Mark Schembri from the **UQ School of Chemistry and Molecular Biosciences**, says novel techniques may prevent recurrent UTIs and catheter-associated UTIs, while new approaches to prostate biopsy may reduce infectious complications.

"Novel therapeutics involving bacterial interference and anti-adherence molecules hold great promise as future prevention strategies," he said.

Urinary tract infections (UTIs) are among the most common human infectious disease. About 50 per cent of women and 5 per cent of men will develop a UTI at least once in their lifetime. Australians who suffer from chronic recurrent UTIs are at risk of being infected with antibiotic-resistant bacteria

The multidisciplinary team was reviewing the global impact of antibiotic resistance on urology practice. Their paper is published in *Nature Reviews Urology*.

"Solving this issue requires responsible use of antibiotics, rapid detection and adherence to infection-prevention practices. New research into non-antibiotic treatments and preventive strategies are also required," Professor Schembri said.

Media: Jenny Johnston, Marketing Communications Officer, UQ Centre for Clinical Research (UQCCR), 07 3346 6041, 0438 753 471 or j.johnston2@uq.edu.au.

Malaria...same old issues?

Travel Medicine and Infectious Disease (2016) 14, 513–514



Correspondence

Malaria deaths in USA and Europe: "It's the same old story". It is time for a change

KEYWORDS
Malaria;
Plasmodium falciparum;
Deaths;
USA;
Europe

diagnosis and treatment of the infection contribute to this unacceptably high death burden.

By contrast, in the USA or Europe where malaria has been eradicated and physicians can rely on accessible laboratory diagnosis and high-quality care, deaths for malaria are principally the consequence of lack of awareness of the disease among both travelers to endemic areas and their caregivers. A recent literature review showed that case fatality rates for malaria in high-income countries range between 0.2% and 3% with principal risk factors for death being age, failure to use an appropriate chemoprophylaxis and the three "Ds", namely, delays in consulting a doctor, diagnosis and treatment [2]. Similarly, a retrospective study conducted in USA between 1963 and 2001 showed that nearly 1 of 100 travelers diagnosed with malaria died with 85.4% of all deaths considered preventable [3].

We analyzed data regarding malaria surveillance in USA from 2003 to 2013 using the reports published by the Centers for Disease Control with the aim to ascertain if the vicious circle involving both travelers and their physicians has been interrupted in the first decade of this century. Although overall the case-fatality rate for this period of time improved (0.38% versus 0.48%), when we compare the periods 1963–2001 and 2003–2013 (Table 1), it is evident that medical errors still significantly contribute to the total outcome of malaria infection. In our opinion, it is especially worrisome that in 37% of patients who die with malaria the

Dear Editor,

Malaria, with an estimated 214 million clinical cases and 438,000 deaths worldwide in 2015, remains the leading parasitic cause of morbidity and mortality in humans [1]. Much of the burden of malaria mortality is in sub-Saharan Africa where 69.8% of deaths are observed among children under 5 years of age [1]. Low access to effective health care systems with important gaps in prevention,

Table 1 Factors implicated in malaria deaths identified in USA.

Period of study [reference]	1963–2001 [2]	2003–2013 ^a
Patients not taking any malaria chemoprophylaxis	57 (46.3%)	24/35 (68.6%)
Patients did not adhere to recommended chemoprophylaxis	6/20 (30%)	4/4 (100%)
Patients' delay in seeking medical care (>1 day)	46 (37.4%)	36/48 (75%)
Wrong initial diagnosis	61/90 (67.8%)	20/54 (37%)
Inaccurate blood parasite diagnosis	4/90 (4.4%)	6/56 (10.7%)
Inappropriate initial antimalarial treatment	9 (10%)	15/54 (27.8%)
Delay in initiating antimalarial treatment	6 (5.3%)	4/54 (7.4%)
Patients who never received antimalarial treatment	18 (14.6%)	6 (10%)
Autopsy diagnosis	22 (17.8%)	4 (8.6%)
Deaths	122	60

^a Available at Mortality Morbidity Weekly Report (MMWR) 2005; 54 (SS2):25–39; MMWR 2006; 55 (SS4):23–37; MMWR 2007; 56 (SS20):23–38; MMWR 2008; 57 (SS25):25–39; MMWR 2009; 58 (SS20):1–16; MMWR 2010; 59 (SS27):1–15; MMWR 2011; 60 (SS20):1–15; MMWR 2012; 61 (SS20):1–17; MMWR 2013; 62 (SS25):1–17; MMWR 2014; 63 (SS17):1–22; MMWR 2016; 65 (SS2):1–22.

<https://dx.doi.org/10.1016/j.tmaid.2016.08.002>
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ARTICLE IN PRESS

Travel Medicine and Infectious Disease xxx (2017) 1–4



Original article

Trend analysis of imported malaria in London; observational study 2000 to 2014

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ARTICLE INFO

Article history:
Received 19 February 2017
Received in revised form 20 April 2017
Accepted 23 April 2017
Available online xxx

Keywords:
Imported malaria
Non-endemic country
Travelers
VIR

ABSTRACT

Background: We describe trends of malaria in London (2000–2014) in order to identify preventive opportunities and to estimate the cost of malaria transmission (2009/2010–2014/2015).
Methods: We identified all cases of malaria, resident in London, reported to the reference laboratory and obtained hospital admissions from Hospital Episode Statistics.
Results: The rate of malaria decreased (54/20010.9/102104) per 100,000. Males were over-represented (62%). Cases in older age groups increased overtime. The rate was highest amongst people of Black African ethnicity followed by Indian, Pakistani, Bangladeshi ethnicities combined (103.3 and 5.5 per 100,000, respectively). The primary reason for travel was visiting friends and relatives (VFR) in their country of origin (59%), mostly sub-Saharan Africa (92%). The proportion of cases in VFRs increased (22% (2009/2010)–50% (2014)) and those taking chemoprophylaxis decreased (38% (2009/2010)–14% (2014)). The overall case fatality rate was 0.3%. We estimated the average healthcare cost of malaria admissions to be just over £1 million per year.

Conclusion: Our study highlighted that people of Black African ethnicity, travelling to sub-Saharan Africa to visit friends and relatives in their country of origin remain the most affected with also a decline in chemoprophylaxis use. Malaria awareness should focus on this group in order to have the biggest impact but may require new approaches.

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1. Introduction

In 2015, approximately 214 million cases of malaria and an estimated 438,000 deaths were reported worldwide, with an estimated fall in incidence of 37% between 2000 and 2015 [1]. Africa remains the most affected continent, with approximately 90% of all malaria cases and 92% of malaria deaths (WHO).

The UK has the second highest number of imported cases in Europe, following France [2]. In the last five years half of all cases

reported in the UK occurred in London. This is likely to be a reflection of the ethnic diversity of the London population and also their travelling habits. In 2011, it was estimated that 8% of the total UK population were born abroad. In 2014 the figure was over 14% and in London the estimate is above 30% [3].

More than half of malaria cases are individuals travelling to visit friends and relatives in their country of origin. Cases also occur in visitors and new entrants to the UK from abroad, as well as individuals travelling abroad from the UK for holiday or business. Changes in travel patterns and migration, as well as changes in the global epidemiology of malaria are likely to have an impact on the number of imported cases. However, the risk of malaria can be reduced by taking bite prevention measures, such as the use of bed nets and mosquito repellents, as well as taking appropriate chemoprophylaxis [4].

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<https://doi.org/10.1016/j.tmaid.2017.04.004>
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Travel Medicine and Infectious Disease 14 (2016) 548–550



Editorial

The threat of artemisinin resistant malaria in Southeast Asia

Keywords:
Malaria
Artemisinin resistance

resistance in other *Plasmodium* species yet. Lack of artemisinin efficacy leaves the ACT partner drug unprotected, inevitably partner drug resistance (mefloquine, piperaquine) has now followed and recent therapeutic efficacy studies in Thailand and Cambodia show an alarming rise in ACT treatment failure rates [10–13]. This should be set against a steady reduction in the incidence of malaria in the region. Thus while the risk of treatment failure has risen, the risk of acquiring malaria has fallen.

Artemisinin resistance can be assessed by various methods including measurement of the parasite clearance half-life, a crude surrogate – the proportion of cases still parasite positive by microscopy at day 3, in-vitro tests assessing ring stage susceptibility, and sequencing of *Pfkelch13* (K13 mutations in the "propeller region" of the gene are associated strongly with resistance) [3,34]. ACT treatment efficacy is assessed using standard therapeutic efficacy testing of ACTs with 42-day follow up [3]. The updated global distribution of artemisinin resistance can be followed using the K13 Molecular Surveyor, an interactive map provided by the Worldwide Antimalarial Resistance Network (Fig. 1), that shows the current K13 mutation prevalence (<http://www.wwanet.org/molecular-surveys/0-13>).

Fifty years ago it was becoming clear that the enormous global effort to eradicate malaria had failed. There were also an increasing number of worrying reports that the wonder drug chloroquine was not working as it should against falciparum malaria in parts of South-East Asia and South America. Chloroquine resistance spread slowly at first, but by 1979 it had reached the Eastern coastline of Africa, and by 1992 it had crossed the entire continent. Chloroquine could no longer be relied upon to treat malaria, and its preventive efficacy was also in decline. Chloroquine was replaced eventually by sulfadoxine-pyrimethamine as first-line treatment, but this fell rapidly to resistance in many places. Later it was shown by analysis of the sequences flanking the mutant resistance genes (*Pfpr* and *Pfshp* respectively) that the parasites causing illness and death in Africa had their genetic origins close to the Thailand-Cambodia border [1,2]. In 1984 mefloquine was introduced as first-line treatment for falciparum malaria in Thailand, but resistance soon followed. The prospect of truly untreatable malaria loomed. The region was saved by githouanil (artemisinin), a Chinese traditional remedy that has since become the cornerstone of recommended antimalarial treatments [3]. In the treatment of severe malaria paracetamol artesunate was shown to reduce mortality substantially and so has become the treatment of choice. Artemisinin-combination therapies (ACTs) are now the first-line treatment for uncomplicated *P.falciparum* malaria throughout the tropical world, and they are increasingly recommended for vivax malaria [1]. But the history of antimalarial resistance emergence and spread is beginning to repeat itself.

Only one year after WHO recommended that ACTs be used everywhere, delayed parasite clearance in *P.falciparum*, suggesting artemisinin resistance, was reported close to the Thailand-Cambodia border [4,5]. In the following ten years the area in which artemisinin resistance is prevalent has expanded substantially. Artemisinin resistance now extends across the Greater Mekong subregion from the coast of Vietnam in the East to the border of India in the West [6,7]. There are worrying reports also from French Guiana [8]. To date there is no clear proof that artemisinin resistance has reached Africa yet [9], and no report of artemisinin

<https://doi.org/10.1016/j.tmaid.2016.08.002>
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Travel Medicine and Infectious Disease (2015) 13, 192–196



CONTROVERSIAL COMMENTARY

Mefloquine at the crossroads? Implications for malaria chemoprophylaxis in Europe

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Received 28 July 2014; received in revised form 5 March 2015; accepted 6 March 2015
Available online 21 March 2015

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<https://dx.doi.org/10.1016/j.tmaid.2015.03.010>
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Spinello A et al. Malaria deaths in USA and Europe: "It's the same old story". It is time for a change. *Travel Medicine and Infectious Disease* 2016

Rees E et al. Trend analysis of imported malaria in London; observational study 2000 to 2014. *Travel Medicine and Infectious Disease* 2017

Borimas H et al. The threat of artemisinin resistant malaria in Southeast Asia. *Travel Medicine and Infectious Disease* 2016

Schlägenhauf P et al Mefloquine at the crossroads? Implications for malaria chemoprophylaxis in Europe. *Travel Medicine and Infectious Disease* 2015



Malaria outbreaks

MALARIA IN UNITED KINGDOM EX SOUTH AFRICA
13 Mar 2018
Limpopo, South Africa
As of 16 March 2018, two cases of falciparum malaria have been reported in UK travellers returning from game reserves near Tsalalwater, Waterberg, Limpopo Province. These areas are usually considered to be free of malaria by South African authorities, although cases in the local population have been reported in the past year.
ECDC - Read more

MALARIA IN CAPE VERDE
14 Nov 2017
Praia, Cape Verde
As of 12 November 2017, a total of 4 locally acquired cases have been reported in the capital city of Praia, Santiago Island, since the end of June 2017.
State - Read more

MALARIA IN SOUTH AFRICA
31 Oct 2017
South Africa
As of 31 October 2017, increased numbers of cases of malaria have been reported in the malaria transmission areas (Dhembie and Mopani districts) in Limpopo (including some cases in farms along the Laphuaba River, Waterberg) and in Bluebonkberg in Mpumalanga provinces.
State - Read more

MALARIA IN BURUNDI
11 Oct 2017
Burundi
As of 8 October 2017, weekly malaria case counts are exceeding 2016 rates and continue to be on the rise. In the week starting 1st October, the most affected health districts were Kirundo (6,270) and Gitega (6,164).
WHO - Read more

MALARIA IN SOUTH AFRICA
22 Oct 2017
Gauteng, South Africa
As of 20 October 2017, seven cases with a death have been reported in Gauteng Province. Malaria is not considered endemic in this area and the most likely scenario is thought to be infected mosquitoes introduced from endemic areas in vehicles. Only 7/2 such cases have been reported since 2007.
State - Read more

MALARIA IN ITALY
04 Oct 2017
Puglia, Italy
As of 6 October 2017, cases of P. falciparum malaria have been reported in four agricultural workers in Puglia Region. None had any recent travel history to a malaria-endemic country. The most likely scenario for the local transmission has yet to be identified.
ECDC - Read more

MALARIA IN ITALY
04 Sep 2017
Trentino, Italy
As of 2 September 2017, a fatal non-travel-related case of P. falciparum malaria in a four year old with likely transmission in Trento region, northern Italy, was reported on 5 September 2017. The case had recently been admitted to a hospital ward with two patients being treated for travel-related P. falciparum malaria. The exact mode of transmission is currently unknown.
ECDC - Read more

MALARIA IN FRANCE
18 Sep 2017
France
As of 16 September 2017, two locally acquired cases have been reported in the department of Allier, southern France. Both cases attended a wedding in Allier, 11-16 August 2017. Investigation of the travel itineraries of wedding guests as well as others who have visited recently are under way. The area is also searched for possible mosquito vectors.
ECDC - Read more

MALARIA IN UNITED KINGDOM EX CYPRUS
15 Sep 2017
View Countries +
As of 16 September 2017, P. vivax malaria has been reported in three UK residents who have recently returned from Esentepe in northern Cyprus.
ECDC - Read more

MALARIA IN GREECE
11 Sep 2017
Greece
As of 17 August 2017, a total of five locally acquired P. vivax cases have been reported this year in the Western (3) and Central (2) regions. A rare P. falciparum case is currently considered to be hospital-acquired.
State - Read more

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Latest News of Malaria between 24 Jun 2017 and 24 Jun 2018

16 Mar 2018 SOUTH AFRICA: MALARIA IN MPUMALANGA AND LIMPOPO PROVINCES
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29 Nov 2017 WHO PUBLISHES WORLD MALARIA REPORT 2017
On 29 November 2017 World Health Organization (WHO) publishes the World Malaria Report 2017
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19 Oct 2017 UPDATED GUIDELINES FOR MALARIA PREVENTION IN TRAVELLERS FROM THE UK: 2017
The Public Health England (PHE) Advisory Committee on Malaria Prevention (ACMP) has published updated malaria guidelines
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31 Oct 2017 PRESENTING NATHNAC MALARIA MAPS 2017
What's in a map?
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02 Oct 2017 UPDATED GUIDELINES FOR MALARIA PREVENTION IN UK TRAVELLERS COMING SOON
Public Health England (PHE) Advisory Committee on Malaria Prevention (ACMP) will soon be publishing updated malaria guidelines
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25 Sep 2017
MALARIA CASES IN EUROPE - SUMMER 2017
Information about malaria cases in Europe, Summer 2017, and advice on awareness and prevention

MALARIA RESEARCH MOSQUITO INFECTIONS

- United Kingdom (UK) ex Cyprus – Three cases of P. vivax malaria have been reported in UK residents returned from Esentepe in northern Cyprus
- France – Two locally-acquired cases of P. falciparum malaria have been reported in central France.
- Greece – Five cases of P. vivax malaria and one case of P. falciparum malaria have been reported in western and central Greece.
- Italy – one fatal locally-acquired case of P. falciparum malaria has been reported in northern Italy.
- Any further developments will be followed closely.

United Kingdom ex northern Cyprus
On 8 September, the UK reported three cases of P. vivax malaria in travellers returning from Esentepe, northern Cyprus. Two of the cases were siblings aged twelve who travelled independently of the third case. The three cases all stayed in the northern part of Cyprus for two to three weeks in August and developed symptoms on 29 August. They were laboratory confirmed upon return to the UK [1,2]. The Northern Cyprus Turkish Republic Ministry of Health has conducted investigations and so far no Anopheles mosquitoes (the species of mosquito capable of transmitting malaria) have been detected in the area where the UK tourists stayed; however one imported case of malaria has been identified in a tourist who had returned to the area from a country where malaria is known to occur; this case is currently undergoing treatment [3].

France
On 7 September, France reported two locally-acquired cases of P. falciparum malaria in Allier Department, Auvergne-Rhône-Alpes Region, central France. Both cases had attended a wedding in Moulins that took place 11-16 August. The onset of symptoms in both cases was 26 August. Neither of the cases, or any of the other wedding guests, had recently travelled to a malaria-endemic area. However, an imported case of P. falciparum malaria from Burkina Faso was identified to have stayed in Moulins and the surrounding area two weeks before the wedding. No Anopheles mosquitoes have been detected in the area. Investigations to establish a link between the imported cases and locally-acquired cases are ongoing [1,2].

Greece
On 17 August 2017, Greece reported five cases of P. vivax malaria acquired via local mosquito borne transmission. Likely areas of exposure are the regions of Dytiki Ellada in West Greece (four cases) and Sterea Ellada in Central Greece (one case). The dates of onset of the cases range between 2 May and 22 July 2017 [1]. In addition, one locally-acquired case of P. falciparum malaria has been reported in the region of Ipeiros in northwest Greece with symptom onset between 17 and 23 July 2017. This case had no recent travel history to a malaria-endemic area and was recently hospitalised in a ward where another patient was being treated for P. falciparum malaria. The investigation concluded that the case could be the result of either a nosocomial (hospital acquired) vector-borne transmission or a nosocomial transmission of iatrogenic (related to medical treatment) origin, but was not related to blood transfusion [1,2].

Italy
On 5 September 2017, Italy reported a fatal case of locally-acquired P. falciparum malaria in a four year old girl with likely transmission in Trento region, northern Italy. This case had no travel history to a malaria-endemic area and had been recently hospitalised in Trento in the same ward where two other patients were being treated for P. falciparum malaria. Investigations at the hospital did not identify breaches in medical procedures that could have resulted in an iatrogenic transmission. Entomological investigations in the area of Trento did not reveal the presence of Anopheles mosquitoes. Tests to establish a link between the imported cases and locally-acquired cases are under way [1,2].

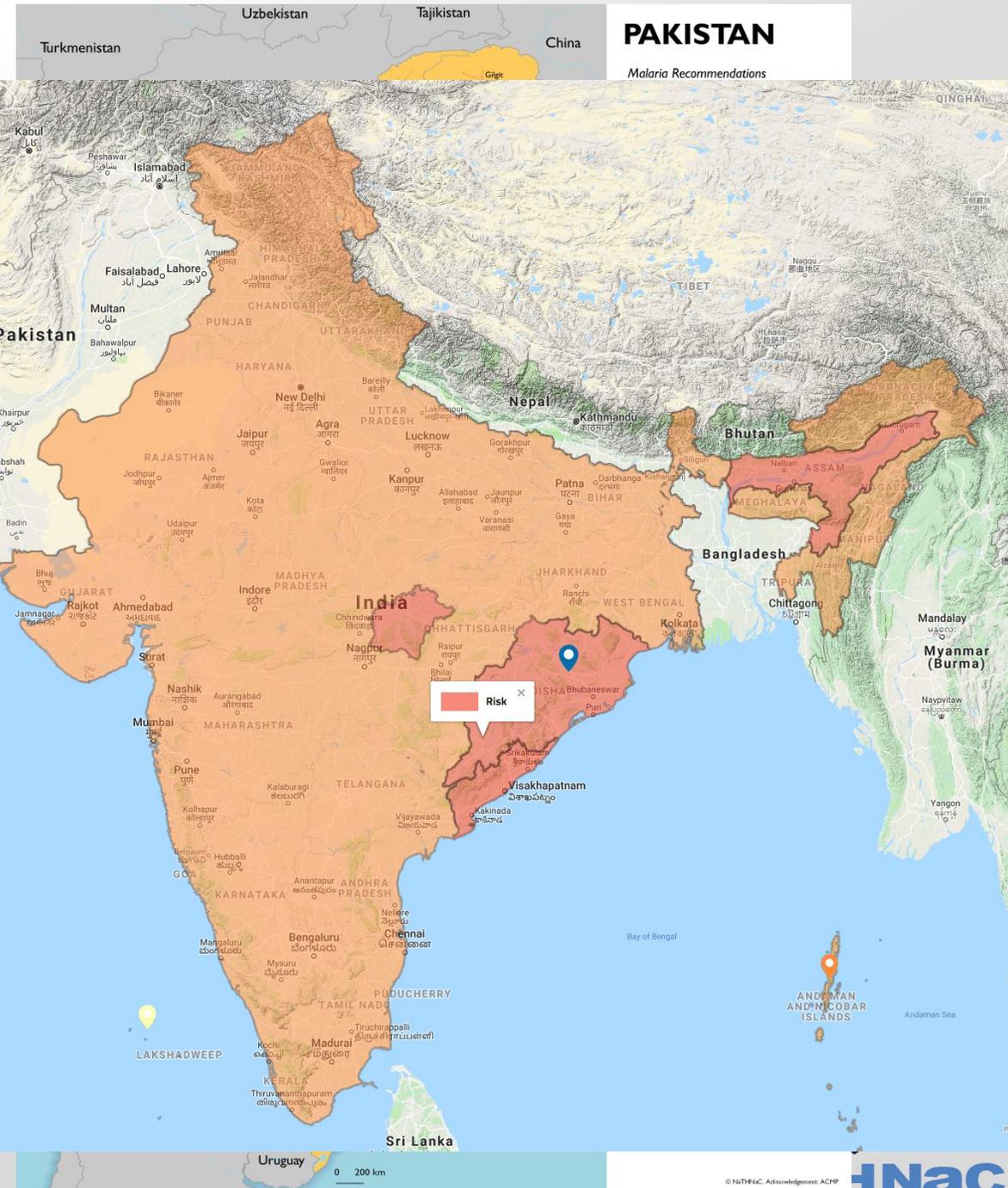
Sporadic cases and clusters of locally acquired malaria have been reported in European Union (EU) countries in the past years. ECDC has advised several options for response to malaria transmission events in the EU including blood safety measures. Three of these transmission events were likely mosquito borne either from an imported case (introduced malaria) or an imported mosquito (airport or baggage malaria) and two were nosocomial transmission events either from a mosquito in a healthcare setting or via iatrogenic transmission. ECDC considers the risk of further spread within the EU as a result of these events to be very low [2].

Malaria

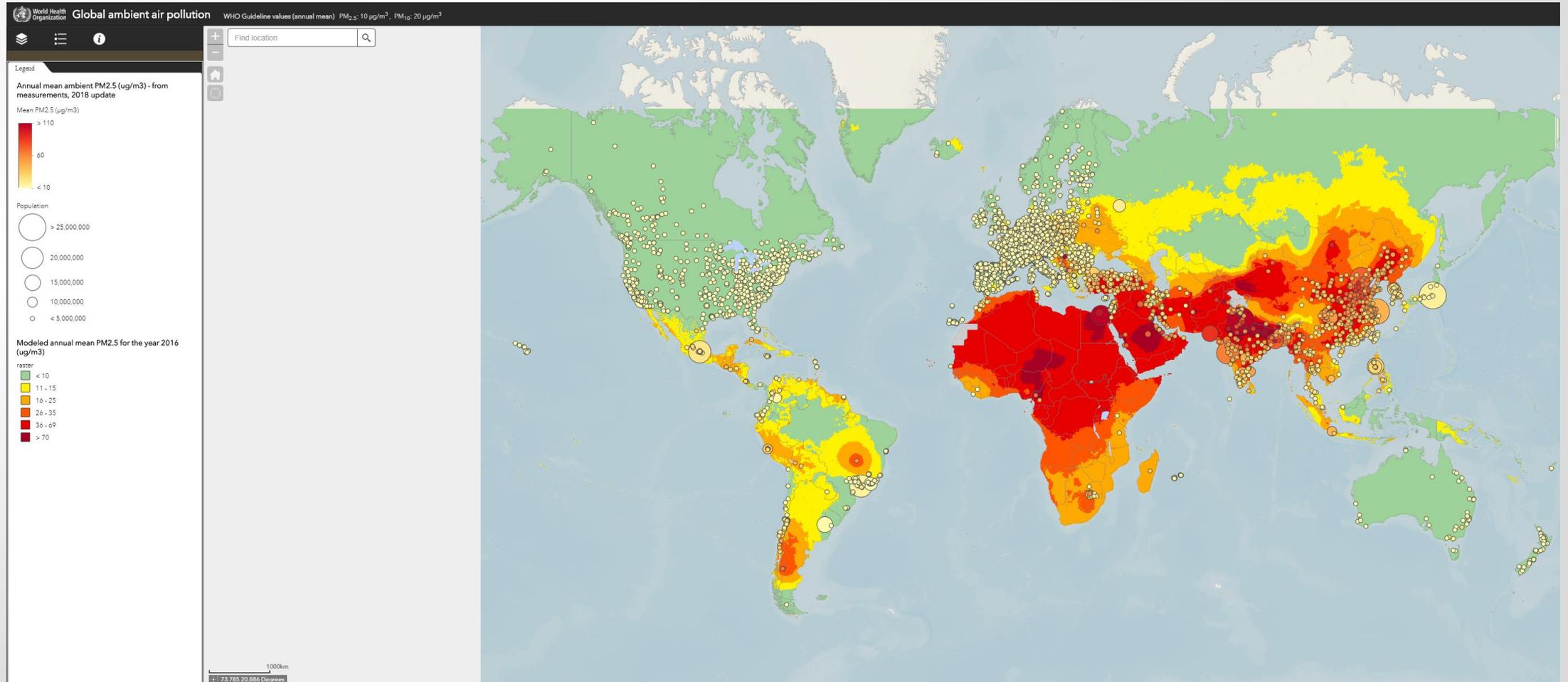


Protecting and improving the nation's health

Guidelines for malaria prevention in travellers from the UK: 2017



Air Pollution



People do their own research

Home / Latest News / **Air Pollution: New Delhi, India**

14 Nov 2017

AIR POLLUTION: NEW DELHI, INDIA

Travellers are advised to take sensible precautions to minimise their exposure to high levels of air pollution



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Legionella

Advice for travellers

Currently, there are no travel restrictions to New Delhi relating to this situation. However, travellers are advised to take sensible precautions to minimise their exposure to high levels of air pollution and to take notice of any Health Advisories published by the Indian Ministry of Health and Environmental Agency.

Studies have shown that long-term exposure to air pollution reduces life expectancy by increasing deaths from cardiovascular and respiratory conditions and from lung cancer. Short-term exposure to elevated levels of air pollutants may result in an exacerbation of pre-existing respiratory or cardiovascular illnesses. Those with pre-existing conditions that might make them more vulnerable to the effects of air pollution who are travelling to areas of high pollution should discuss their travel plans with their healthcare provider, follow precautions to minimise their exposure, and carry adequate supplies of their regular medication.

It is not clear to what extent face masks would be beneficial to reducing exposure and they may compound difficulties in breathing for those with pre-existing lung conditions.

Country-specific health advice for travellers to India can be found on [our Country Information pages](#).

Travellers are advised to consult the [Foreign and Commonwealth Office](#) for current travel advisories for India.



New Delhi US Embassy Air Pollution: Real-time Air Quality Index (AQI)

NEW DELHI US Embassy Air Pollution: Real-time Air Quality Index (AQI)

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New Delhi US Embassy AQI: New Delhi US Embassy Real-time AQI

155 **Unhealthy**
Updated on Monday 4:00
Temp: 27°C

Current Past 48 hours data
PM2.5 AQI: 155

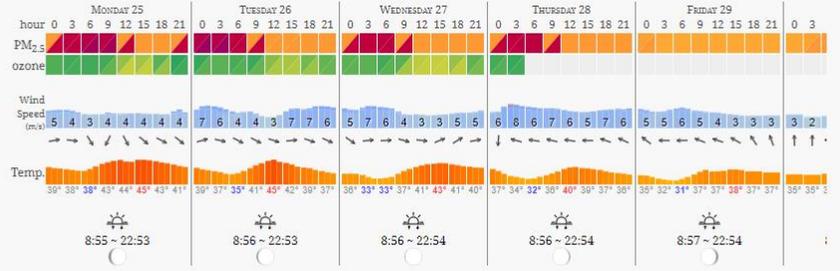
Weather Information

Current Past 48 hours data
Temp: 27
Pressure: 983
Humidity: 65



AIR QUALITY FORECAST

Day	Temp (High/Low)
MON 25	45°C / 38°C
TUE 26	45°C / 35°C
WED 27	43°C / 33°C
THU 28	40°C / 32°C
FRI 29	38°C / 31°C
SAT 30	38°C / 32°C
SUN 1	37°C / 30°C



Pre-travel

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- Ilha Grande
- He is HIV posi
- load >100 cop

RAPID COMMUNICATIONS

Increased risk of yellow fever infections among unvaccinated European travellers due to ongoing outbreak in Brazil, July 2017 to March 2018

Céline M Gossner¹, Joana M Haussig¹, Chiara de Bellegarde de Saint Lary¹, Kaja Kaasik Aaslav¹, Patricia Schlägenhauf², Bertrand Sudre¹

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Citation style for this article:
Gossner Céline M, Haussig Joana M, de Bellegarde de Saint Lary Chiara, Kaasik Aaslav Kaja, Schlägenhauf Patricia, Sudre Bertrand. Increased risk of yellow fever infections among unvaccinated European travellers due to ongoing outbreak in Brazil, July 2017 to March 2018. *Euro Surveill.* 2018;23(1):pii=18-00106. <https://doi.org/10.2807/1560-7917.ES.2018.23.11.18-00106>

Article submitted on 09 Mar 2018 / accepted on 15 Mar 2018 / published on 15 Mar 2018

Since December 2016, Brazil has faced a large outbreak of yellow fever with ca 1,500 confirmed human cases. In the first 2 months of 2018, Brazil reported almost as many cases as in 2017 as a whole. In these 2 months, five imported cases were reported among unvaccinated European travellers. Three had travelled to Ilha Grande, a popular destination among European tourists. Physicians and European travellers visiting Brazil should follow yellow fever vaccination recommendations.

Since December 2016, Brazil has faced a large outbreak of yellow fever (YF) [1]. The recent increase in magnitude of this outbreak, both in terms of geographical spread and in number of cases, poses an increased risk of YF infection to unvaccinated European travellers to Brazil as evidenced by recent reports of five imported cases to Europe in the past 2 months.

Ongoing outbreak in Brazil

Yellow fever is an arboviral disease of primates transmitted by mosquitoes of the *Aedes* and *Haemagogus* species. In Brazil, YF is endemic in large parts of the country. Historically, the regions from where most cases were reported were forested and rural areas such as the hydrographic basins of the Amazon, Araguaia, Tocantins and Paraná rivers [2].

In 2014/15, YF virus emerged at the periphery of endemic areas with the detection of non-human primate (NHP) cases [1]. In Brazil, yellow fever surveillance is set up from July to June the following year. During the surveillance period 2016/17 (July 2016 to June 2017), the virus spread geographically, reaching nine states in central and south-eastern Brazil (i.e. Distrito Federal, Espírito Santo, Goiás, Mato Grosso, Minas Gerais, Pará, Rio

de Janeiro, São Paulo and Tocantins) and causing 779 human cases including 262 deaths (Figure 1) [1].

In addition, 1,659 epizootics (clusters of cases detected among NHPs) in NHPs were reported, causing the death of more than 2,000 animals. After a decline in incidence of human cases from April to May 2017, and very few cases reported between June and November 2017, a second wave of the outbreak started in December 2017 (Figure 2) [3].

From July 2017 to 13 March 2018, 920 confirmed human cases including 300 deaths were reported; most cases occurred in January and February 2018 [3]. In comparison, during the same period in 2016/17, there were ca 610 confirmed human cases. Between July 2017 and 13 March 2018, five states reported YF cases: Minas Gerais (n = 415), São Paulo (n = 376), Rio de Janeiro (n = 123), Espírito Santo (n = 5) and Distrito Federal (n = 1). In the same period, there were 617 epizootics, the majority of them in the State of São Paulo (n = 502) (Figure 3). While the increase in the number of human cases started in December 2017, the upsurge of epizootics has been ongoing since mid-September 2017. This situation is consistent with the fact that NHPs are more exposed to mosquitoes compared with humans, hence they are commonly used as sentinels for early detection of YF transmission [2,4].

The detection of epizootic events in the States of São Paulo and Rio de Janeiro with close vicinity to two highly populated metropolitan regions remains of concern [5,6]. It highlights an increased likelihood of peri-urban or urban cycles of YF transmission, which in megacities such as São Paulo and Rio de Janeiro could lead to very large outbreaks and consequently higher risk of exposure of international travellers.

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During travel

- Sarah (39), born in India, who works for a multinational company in her husband's country.
- His job requires frequent travel to the country.
- She has recently become pregnant.
- This is her first pregnancy.

TRAVEL HEALTH PRO COUNTRY INFORMATION LATEST NEWS OUTBREAK SURVEILLANCE DISEASES IN BRIEF FACTSHEETS FROM A-Z WORLD OVERVIEW

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26 May 2017

INDIA ADDED AS A MODERATE RISK AREA FOR ZIKA VIRUS TRANSMISSION

Zika virus advice for travellers to India updated, pregnant women should consider postponing non-essential travel until after the pregnancy

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Malaria Vaccine Product supply
Legionella

Resources

- Zika virus in brief
- Public Health England: Zika virus clinical and travel guidance

References

On return

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RAPID RISK ASSESSMENT

Public health risks related to communicable diseases during the Hajj 2017, Saudi Arabia 30 August – 4 September 2017

10 August 2017

Main conclusions and options for response

This year, the Hajj takes place between 30 August and 4 September. This document assesses the potential risk of outbreaks and transmission of communicable diseases during the Hajj.

Due to the vaccination requirements prior to travel to Mecca, Saudi Arabia, and the preparedness plans addressing the management of health hazards during and after the Hajj, the overall risk of acquiring infectious diseases during the Hajj 2017 in Saudi Arabia is considered to be low.

The risk of communicable disease outbreaks is highest for food- and waterborne diseases and respiratory illnesses due to crowding, but the risk is not considered higher than can generally be expected for international mass gatherings of this size. MERS-CoV activity continues to be reported in the Arabian Peninsula, specifically from Saudi Arabia, and therefore imported cases may be detected in Europe following the Hajj. The risk of transmission of vaccine-preventable and vector-borne diseases is considered to be low.

The national health authorities from countries from where Muslims embark on the Hajj pilgrimage to Mecca should apply appropriate strategies for the prevention and control of communicable diseases before, during and after the completion of the Hajj.

Advice for those travelling to the Hajj

Prior to travelling

- Seek advice from healthcare providers on vaccination requirements for visa and entry into the country as well as recommendations issued by the Ministry of Health of Saudi Arabia and WHO to update routine vaccinations including boosters as recommended in your EU country of residence. See [ECDC vaccine schedule site](#).
- Seek advice from healthcare providers about additional recommendations, including travel vaccines related to travelling to the Hajj. In dialogue with a healthcare provider, consider postponing the travel if you are pregnant, or if an accompanying child is aged under 12 years. Avoid travelling if aged over 65 years, if you have chronic disease, immune deficiency, illness due to cancer, or terminal illness.

Suggested citation: European Centre for Disease Prevention and Control. Public health risks related to communicable diseases during the Hajj 2017, Saudi Arabia, 30 August–4 September 2017 – 10 August 2017. Stockholm: ECDC; 2017.
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d high fever.

Shanghai to Los Angeles in 5 hours? Why supersonic air travel could boom in Asia

Kate Springer, CNN • Updated 29th May 2018



2/8

Interest in Asia: Support for the Denver-based startup has expanded to Asia as well. In December, Japan Airlines reportedly invested \$10 million to pre-order 20 of the 55-seat airliners, which are slated for a 2023 debut. This spring, Ctrip -- Asia's largest travel services provider with 300 million registered users -- became Boom's first strategic partner from China.

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Infinity and beyond: Will Virgin Galactic ever make it into space?



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