

TAISTEAL



Volume 17

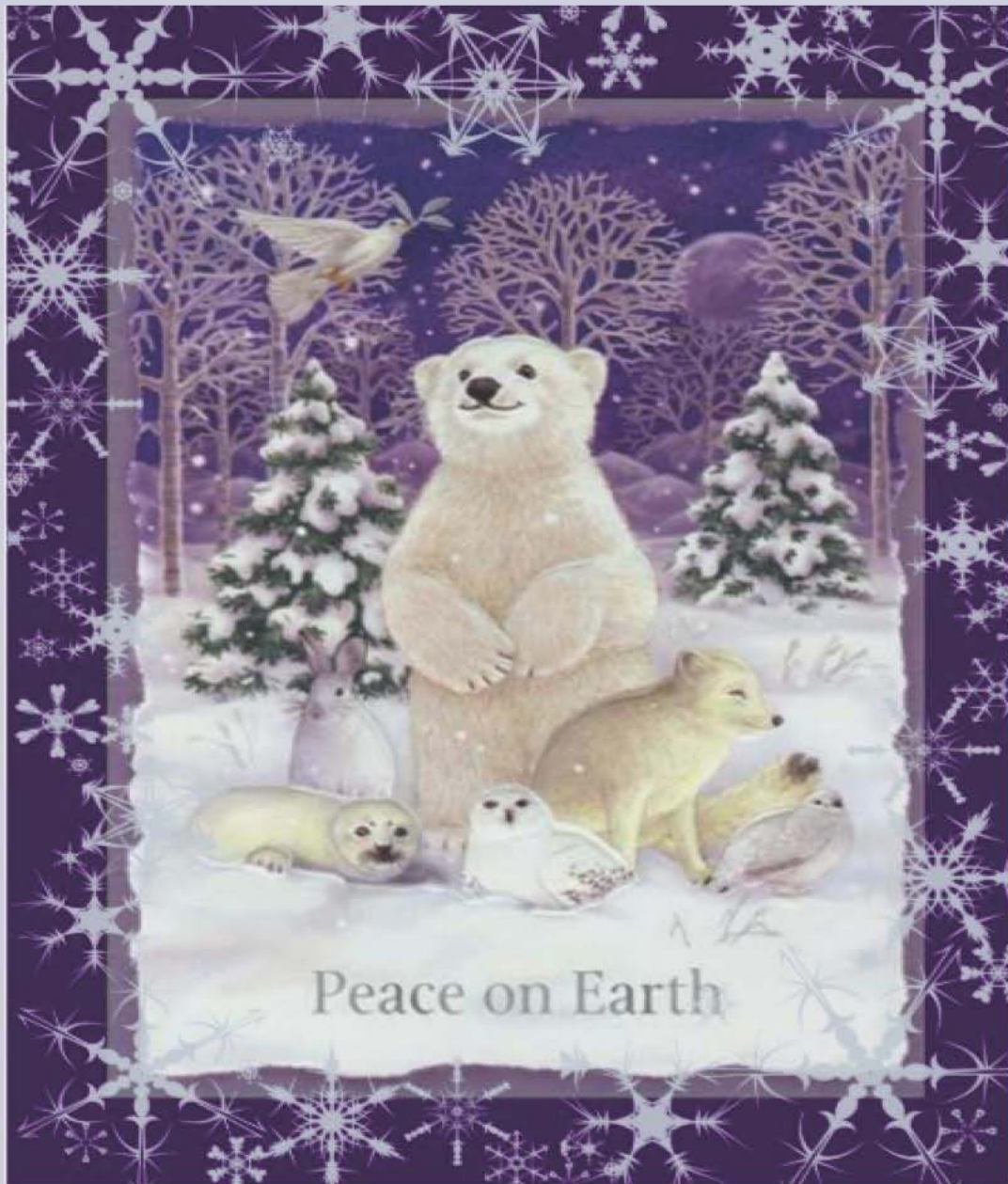
Issue 3

Winter 2017

NEWSLETTER

ed. S. Collins

The Travel Medicine Society of Ireland



*wish all our members a very Happy Christmas
and a Prosperous New Year
We look forward to seeing you in 2018*

EDITORIAL

2017 has been an eventful year and issues of Taisteal during the period have been focussed on keeping up with emerging disease trends. The Zika virus appeared in both India and south-east Asia and is in a number of African countries, including Uganda. In Brazil, the Yellow Fever virus has now arrived in metro Rio and other coastal areas. The past summer was characterised by shortages of both Hepatitis A and Hepatitis B vaccines, which will have caused major headaches for TMSI members. At the time of writing, stand-alone Hepatitis A vaccine is still not available but at least the Hepatitis A-Typhoid (combined) vaccine has come back into stock.

2018 will be a year with plenty of learning opportunities; the next TMSI meeting will be held in Athlone on Saturday 10th February (Hodson Bay Hotel), with a number of small group teaching sessions being held throughout the morning. Further TMSI meetings will follow in April, September and November. In May, the biennial Northern European Conference of Travel Medicine will be held in Stockholm (May 2nd – 4th https://mkon.nu/nectm_7). In a boost to the profile of Travel Medicine in this country, the TMSI's Prof. Gerard Flaherty has been invited by the conference organisers to deliver the address at the opening plenary session. Finally, our Travel Medicine colleagues in the U.K. have launched a new online training course, profiled in this issue by Dr. Eric Walker of the BGTHA.

ADDRESSING THE NEEDS OF THE OBESE TRAVELLER

Obesity has become a major global health problem but the topic has been largely neglected in the travel medicine literature. The prevalence of obesity among international travellers and their travel patterns is unknown. There may be a reluctance to discuss weight-related issues during a pre-travel consultation to avoid patient or clinician embarrassment or because it may not be deemed relevant to travel. Failing to counsel obese travellers about specific travel health precautions exposes them to clinical risk and the clinician to medicolegal challenges.

International travel presents various health risks that disproportionately affect the obese traveller. Online blogs suggest that international travel is associated with considerable prejudice against obese travellers. The obese traveller may experience negative attitudes in different cultures, such as implied laziness, greed, or inadequate self-discipline. The extent of these experiences in obese travellers is the subject of a qualitative study I have completed with a colleague in University Hospital Galway where there is a bariatric medicine service.

The health risks of air travel in obese passengers are well known and include hypoxaemia in obesity-hypoventilation syndrome, deep vein thrombosis, limited aircraft seat width, cramped airplane toilets, and practical difficulties with medical evacuation. At commercial air travel cruising altitudes, significant arterial oxygen desaturation can adversely affect passengers with obesity-hypoventilation syndrome. The pressure for space in economy class airline seats is of particular relevance to the obese traveller. Complaints from neighbouring passengers and requests to be moved to an empty seat must be very upsetting for the obese traveller. The fact that most economy class airliner seats are the same size does not take account of the variations in modern passenger body shape. Airline policies regarding seat allocations for obese passengers vary widely but most airlines recommend that the obese cabin traveller, who does not fit comfortably into a single seat with the armrests down, should purchase a second seat which may or may not be discounted or refunded if the flight is not full. Airlines will provide usually brightly coloured seat belt extenders but I have observed obese passengers visibly upset by the indiscrete behaviour of flight attendants distributing such devices. Samoa Air caused controversy in 2013 when it introduced a policy of weighing passengers

and their luggage in order to calculate the airfare. Such a policy is fortunately not yet widespread in the European aviation industry, although I have been weighed myself on trips to the Aran islands with Aer Arann – for balance reasons I was reliably informed!

Obesity is of course associated with an increased risk of mortality from multiple causes, including cardiovascular disease and cancer. In the pre-travel consultation, there should be a discussion of the importance of purchasing travel health insurance which includes medical evacuation and repatriation cover. The obese traveller should disclose all pre-existing co-morbid conditions with the insurance physician and to confirm that he/she is insured against all proposed destination activities, especially any adventure sports. Wheelchair assistance may need to be arranged in advance with the airline if the obese traveller is limited by shortness of breath, and some destinations provide electric convenience vehicles. Our obese patients should be strongly encouraged to undertake physical activity during travel but we need to take a sensible approach and recognise their limitations.

There is a recognised association between excessive body weight and psychiatric disorders. The presence of psychiatric illness may not always be revealed in a travel medicine setting especially if the travel physician is not the patient's primary caregiver. The travel health provider should consider whether specific travel mental health advice would be appropriate for the individual's itinerary, especially if they are planning to do volunteering or work in a humanitarian aid work setting. The literature on the mental health effects of travel is disappointingly sparse, however, and further research is overdue in this area.

In an attempt to circumvent long waiting lists or to access services not available in their own country, some patients with a body mass index greater than 35 kg/m² choose to travel across international borders to undergo laparoscopic gastric banding and other bariatric surgical procedures. The potential risks of bariatric tourism include the lack of continuity of care, higher complication rates such as port site infection, the risk of acquiring antibiotic resistant bacteria, and lack of transfer of operative information to the patient's own GP. We are currently investigating this trend in our own bariatric medicine service.

The practical difficulties which obese travellers must face during travel-related activities is not always appreciated. Heat stress may be a fatal consequence of exertion and inadequate fluid replacement and at the very least may make exercise difficult. The mobility-impaired obese traveller is probably also more vulnerable to being the victim of a mugging attempt. There is a higher incidence of acute mountain sickness in obese individuals, an effect which is linked to nocturnal oxygen desaturation due to obesity-hypoventilation syndrome. Excessive body weight may also make stretcher rescue from wilderness settings very difficult. Other recreational barriers may include small theme park ride seats with small seat belts; weight restrictions on bungee jumps; and body image concerns causing personal embarrassment on beaches.

Our current qualitative study is drawing attention to these realities and we will be submitting it for publication in January. We should all try to convey a more empathetic approach when advising obese travellers during the pre-travel consultation. This requires a very sensitive and tactful approach but working together with our travellers we can negotiate practical workarounds to many of these problems.

References available on request.

Prof. Gerard Flaherty



NECTM7

Northern European
Conference on Travel Medicine
Stockholm May 2-4 2018



Welcome!

www.nectm.com

**Welcome to the
7th Northern European Conference
on Travel Medicine, NECTM7!**

Dates: May 2nd – 4th, 2018

Place: Clarion Hotel Stockholm, Sweden



We will offer you a diversified scientific program as well as a place for a networking and an interesting sponsor exhibition. The scientific committee is planning for two parallel sessions including a regional theme of tickborne diseases. The conference will reflect the multi-disciplinary nature of travel health from the basic knowledge to the latest research and including both nurses, clinicians, academics and students.

See you in beautiful Stockholm!

NECTM/ Local Organising Committee

Registration

**Opens:
October 3rd, 2017**

**Deadline for "early bird":
February 28th, 2018**

**Abstract
submission**

**Opens:
October 3rd**

**Deadline
January 15th, 2018**

TEST YOUR KNOWLEDGE – MULTIPLE CHOICES QUESTIONS IN TRAVEL MEDICINE:

By Dr. Joseph Sim.

1. Sexually transmitted diseases:

- (A) Gonorrhoea has an incubation period of 4-6 weeks.
- (B) Most of females with chlamydia infection are symptomatic eg vaginal discharge & abnormal bleeding.
- (C) Trichomoniasis is caused by a protozoan *Trichomonas vaginalis*.
- (D) Spermicides do not prevent HIV transmission.

2. Arboviruses:

- (A) A group of viral infections confined mainly to the tropics.
- (B) Include Flaviviruses such as Dengue, Japanese Encephalitis & Yellow Fever viruses, Alphaviruses such as Chikungunya virus & Phleboviruses such as Sandfly fever virus.
- (C) The “fever-arthralgia-rash” triad is a common clinical presentation of arboviruses.
- (D) Rift Valley Fever is mosquito-borne and can cause disease in sheep, cattle and other farm animals as well as human.

3. Influenza:

- (A) Influenza A occurs in 2 distinct patterns – epidemics and pandemics.
- (B) There is a consistent but low chance of visitors to Far East such as China & Vietnam becoming infected with avian influenza A H5N1 virus.
- (C) On aeroplanes, the only source of influenza transmission is via respiratory route; shared facilities such as toilet doorknob do not present a risk.
- (D) 2 doses of the seasonal flu vaccine is more effective than single dose vaccine in young children who had never received the seasonal influenza vaccine before.

4. Lyme Disease:

- (A) Is a vector borne infection transmitted by the bite of an infected mosquito.
- (B) There are endemic foci of Lyme borreliosis in forested areas of Asia, north-west / central / eastern Europe and the USA.
- (C) Clinical presentations can be asymptomatic, early localised disease, early disseminated disease and chronic disseminated disease.
- (D) Lyme disease vaccine is available for use in dogs and also for use in human who are at high risk of being infected.

5. Cold climate travel:

- (A) Strong sunlight and UV reflecting off a bright reflective snow or ice surface greatly increases the risk of sunburn.
- (B) Hypothermia develops insidiously over several hours but death can occur within minutes if someone is immersed in cold water.
- (C) Predisposing factors to frostbite include beta-blockers, alcohol, high altitude and dehydration.
- (D) Snow blindness (photokeratitis) is caused by exposure to a sudden extreme drop in environmental temperature.

6. What country is this?:

Hints:

- (a) Home to the “Big Five” & a national park with the highest mountain in Africa.
- (b) The population of 47 millions consist of 120 different tribal groups.
- (c) Health risks here include a wide variety of tropical diseases but malaria and road accidents are major concerns.



Answers on page 7

THE ABC OF TRAVEL HEALTH

An e-learning course on the basics for travel health advisors at
<https://www.abcoftravelhealth.com>

The British Global and Travel Health Association's e-learning course in Travel Medicine was launched on 18th November 2017. The course can be seen as an introduction to travel health or as a refresher course for doctors, nurses and pharmacists who may not wish or be able to undertake other training courses because of lack of funding, inability to travel to teaching sessions or examinations or any other reason. It can be undertaken in the student's own time and at the student's own pace wherever a computer, tablet or smartphone is available.

It consists of 10 "mini-courses" which can be undertaken in any order. These cover such topics as information gathering; risk assessment; prevention of illness in travelers, including vaccinations and malaria prophylaxis; travellers with special needs; managing illness abroad and on return; and setting up and running a travel clinic both in the NHS and privately. Each mini-course contains a variable number of "lessons" on specific areas within the mini-course topic, and individual lessons or groups of lessons are followed by self-assessment questions with immediate feedback on the answers. A certificate is available on completion for annual appraisals and revalidation purposes. Continuing professional development recognition for those wishing this has been granted by the Faculty of Travel Medicine at the RCP&S Glasgow.

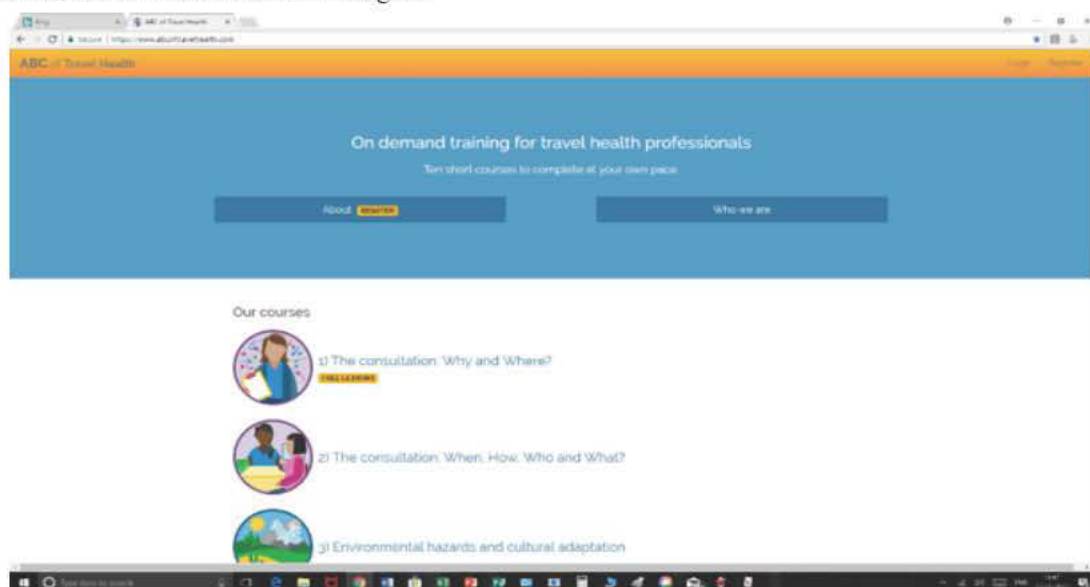


Figure 1 Logging on will take you to the welcome screen

Two of the mini-courses contain a small number of free lessons which can be accessed as samples of the course content following registration but before committing to payment.

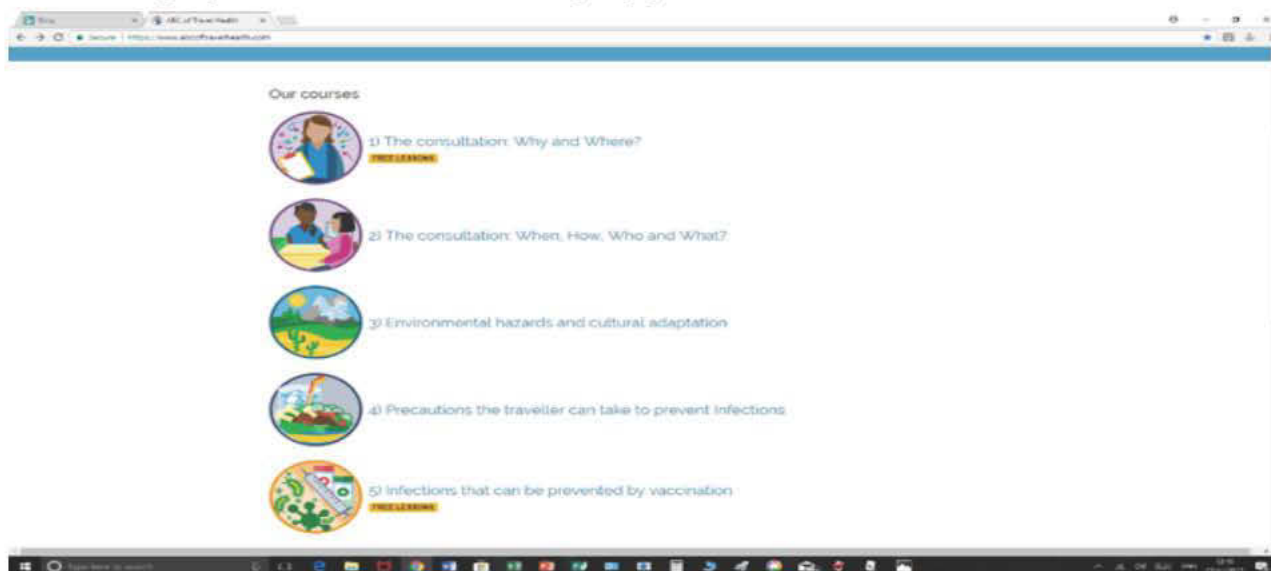


Figure 2 Access to free lessons

Tetanus

Tetanus spores from animal faeces are present worldwide in soil and on other surfaces likely to have been contaminated.

- Infection enters through breaches in the skin surface usually cuts, wounds or penetrating injuries but also through impetigo, ear infections and the umbilical cord stump.
- The incubation period can be up to 21 days.
- The illness is caused by a toxin causing painful muscular rigidity and spasms that may be most noticeable in the jaw muscles - 'risus sardonius' (lock jaw). Muscle relaxants such as diazepam and assisted respiration is sometimes necessary.
- The death rate is around 10% and may be as early as 3 to 4 days after the onset of illness. Eventual recovery can take several weeks.
- There may be delayed fatal cardiac arrhythmias causing sudden death when the illness appears to have abated.



Tetanus in a baby with 'lock jaw'

Vaccination

Tetanus toxoid vaccination is universally recommended as part of national childhood schedules combined with diphtheria toxoid. In the UK it is now also combined with injectable polio vaccine and Haemophilus Influenzae.

As with all national childhood schedules they may not be available for or adhered to by marginalised populations or during breakdown of society structures during civil unrest or wars.

For travellers going to countries, especially to rural areas and for long stays where hygiene is poor, it is recommended that they have 10 yearly tetanus boosters since post-injury boosters may not be available.

For continually updated country-by-country risks and details about vaccination and any changes in vaccine schedules see [TRAVAX](#), [FitforTravel](#) or

Figure 3 A portion of one of the free lessons

The editors are Eric Walker (Hon Professor) and Mike Townend (Hon Senior lecturer) in Travel Medicine and Global Health at the University of Glasgow. All of the contributors are highly qualified and experts in their own particular fields of travel health with the majority being Members or Fellows of the Faculty of Travel Medicine in Glasgow. The software for the course has been written specifically for the course by an expert not only in writing computer code but also in education.

The course fee is £100 but a discounted rate of £70 is currently being offered for a limited period. In addition a discount code may be available on application for groups of 3 or more working in the same clinic. We would appreciate it if you could pass this information onto any colleagues who are not members of the TMSI whom you think might also be interested.

We acknowledge an 'Independent Educational Award' from Glaxo Smith Kline to cover the cost of development of the software on which the course is based, but they have had no input into or influence on the course content.

Take a look at the course now at <https://www.abcoftravelhealth.com>

Dr. Eric Walker

ANSWERS TO TEST YOUR KNOWLEDGE QUIZ FROM PAGE 5

Question	A	B	C	D
1. Sexually transmitted diseases	False	False	True	True
2. Arboviruses	True	True	True	True
3. Influenza	True	True	False	True
4. Lyme Disease	False	True	True	False
5. Cold climate	True	True	True	False
6. Country:	Tanzania			

TRAVEL AND DISEASES OF THE EAR, NOSE AND THROAT

Although a quarter of travel-related illness relates to the upper respiratory tract, there have been very few publications on the subject in the travel medicine journals. Seasonal allergic rhinitis is a common condition and is exacerbated by air pollution and endemic plant species, so flare-ups during travel can be expected. Indeed the prevalence of pollen allergy is predicted to rise as climate change has altered the flowering season, which is starting earlier and ending later than previously. Grass pollen induces hay fever symptoms in sensitised patients. Between 8 and 35% of young adults in Europe have IgE to grass pollen allergens. The peak grass flowering period varies across the continent and occurs earlier at altitude. It is not widely appreciated that thunderstorms – a common feature of life in the tropics – can exacerbate pollen exposure symptoms. Offending pollen allergens include birch, oak, sweet chestnut, mugwort and ragweed. Olive tree pollen in the Mediterranean is known to be extremely allergenic (Figure 1). Cypress allergy is associated with a higher prevalence of dry cough rather than conjunctivitis. Thus, the traveller may be exposed to unfamiliar, but more allergenic, varieties of pollen than those they meet in their native countries.



Figure 1. The Mediterranean olive tree may irritate the sensitised traveller.

Travellers need to be aware of the likely air quality at their destination. The absence of environmental tobacco smoke legislation in certain countries also increases the risk of acute rhinosinusitis in travellers and travellers should be forewarned about this in case they complain to management about the active smoker at the next table in a restaurant! There is a greater focus on particulate atmospheric pollution these days at travel medicine conferences. Diesel exhaust particles make up 90% of airborne particulate matter in large cities. Other airborne pollutants include nitrogen dioxide and ozone. Sunny weather facilitates transformation of nitrogen dioxide to ozone, producing so-called ‘summer smog’ and we are all familiar with the television pictures from major Asian cities which have hosted mass gathering sports events in the past (Figure 2).



Figure 2. Smog over the bird's nest Olympic stadium in Beijing

Otic barotrauma related to commercial air travel is another ENT issue of which practitioners should have some knowledge. It may occur during ascent or descent while flying and SCUBA-diving, and is a greater risk in infants or children and travellers with concurrent rhinitis. Adults with risk factors for sinus or middle ear barotrauma should be offered an oral decongestant before flying and a nasal decongestant spray shortly before descent. Recurrent sinus barotrauma may respond to functional endoscopic sinus surgery in severe cases and myringotomy (+/- grommet insertion) may be performed in high-risk fliers such as the frequent business traveller. Travellers who are post-tonsillectomy, adenoidectomy, palatoplasty or nasal fracture repair may fly once their post-operative bleeding risk has subsided, usually after 2 weeks. Divers with paranasal sinus barotrauma may return to diving after 6 weeks usually. Most tympanic membrane perforations heal spontaneously within a month but persistent perforations may need to be repaired by tympanoplasty. Patients should always follow the advice of their ENT surgeon.

Many of our patients wish to visit high altitude cities or trek in the high mountains. Reversible hearing loss, reduced ability to localise sound waves, and altered vestibular function have all been described in travellers to high altitude. High-altitude vertigo is well described but typically resolves within 3 days although I have never witnessed it myself on high altitude treks. Increased mouth breathing at high altitude may cause high altitude pharyngitis. I always considered the vasomotor rhinitis of high altitude on particularly cold mountains more of a nuisance than a serious malady but I found that wearing a scarf that warmed the inspired air helped considerably. Rhinorrhoea and epistaxis are both more common during travel to high altitude, the latter more difficult to deal with if it is severe or prolonged in a remote setting. Beware the high altitude trekker who is taking anticoagulants. Obstructive sleep apnoea is also aggravated by exposure to high altitude. Alcohol and sedatives should therefore be avoided in these patients. Practical advice regarding the use of dry cell batteries for approved CPAP machines should be observed in air passengers. Airlines are very accommodating of patients who need to use these devices aboard their aircraft but advanced communication is always to be recommended as the company's engineer may need to check if the device is on an approved list. CPAP pressure settings require adjustment because of the decrease in barometric pressure at cruising altitude. The patient should obtain advice from the manufacturer's technical support.

Motion sickness is very unpleasant but can be alleviated by focusing on the horizon, restricting head and neck movements, shutting one's eyes, and using prophylactic antihistamines or transdermal scopolamine patches or intramuscular promethazine in very severe cases. Swimming is a popular recreational activity in our travellers. Otitis externa, mostly secondary to *Pseudomonas aeruginosa*, is 5 times more common in swimmers and may cause conductive hearing loss. Rubber or silicone ear plugs and swimming caps are recommended if swimming cannot be avoided. Sudden sensorineural hearing loss due to rupture of the round or oval window may occur after diving. Travellers should be advised never to balcony jump into a pool, a phenomenon which has led to publicised spinal injuries and deaths in young holidaymakers to Mediterranean destinations such as Majorca where the pool water level was shallower than thought. Water precautions are unnecessary for most children with tympanostomy tubes but diving is generally not advised.

Some of our travellers may be travelling for the purpose of obtaining medical treatment overseas. Medical tourism for cochlear implants may leave travellers exposed if surgical complications occur. The cost of cochlear implant surgery in India is currently about \$30,000 so the motivation of travellers is often to have their procedure performed earlier than waiting lists in their home country will allow. Fortunately, SCUBA-diving after cochlear implantation is possible without damaging the implants but diving should not be resumed for 3-6 months following endoscopic sinus surgery.

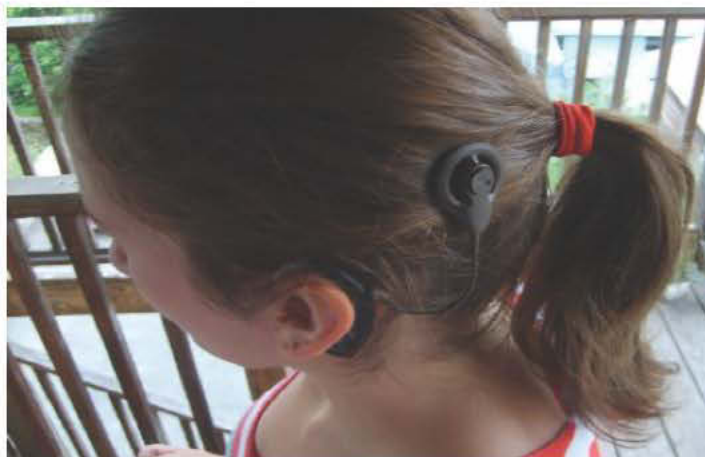


Figure 3. Cochlear implants should facilitate, not impede, international travel

Cocaine use in international travellers is well described and has both ENT and potentially fatal cardiovascular complications. Habitual nasal insufflation of pulverised cocaine may cause sinusitis, septal perforation, saddle nose deformity and ulceration of the nasal mucosa. A possible differential diagnosis in patients with typical symptoms and signs is Wegener's granulomatosis of course. Alcohol and recreational drugs, including cocaine, reduce awareness of potential hearing damage due to loud noise exposure at rave parties and music festivals and this point should be reinforced when counselling groups of younger travellers.

Recently I conducted a travel consultation with a deaf female traveller. It was a fascinating and very rewarding experience. To my shame, I cannot use sign language and this very independent traveller did not want to bring an interpreter with her but we managed fine with hand gestures, facial expressions, a note pad and pen and the internet. I also provided multiple written information leaflets. It did raise concerns about the safety of this lone traveller to South East Asia and it has inspired me to write a letter to the editor of the Journal of Travel Medicine on the subject. I wonder how you have dealt with similar patients who did not bring a sign language interpreter to the clinic. A useful travel-related information resource which you should bring to the attention of the deaf traveller is <http://www.deaftravel.org/traveladvice.php>.

References available on request.

Prof. Gerard Flaherty

PHOTO GALLERY FROM RECENT MEETINGS



Dr. John Gibbons talk



Dr. Eilish Cleary



Prof. Gerard Flaherty talk

Photos courtesy of Dr. Astrid Weidenhammer

Foundation and Diploma Courses in Travel Medicine



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CHALLENGING CASES IN TRAVEL MEDICINE: THE LAST-MINUTE, HIGH-ALTITUDE TRAVELLER WHO THINKS THEY MIGHT NEED A YELLOW FEVER CERTIFICATE

Many Travel Medicine (TM) consultations are straightforward and involve young, well patients on short trips to low-risk holiday resort environments. A subset of consultations are, however, very challenging, can involve 'no right answer' choices and really stretch the knowledge of the practitioner. In the second of an occasional series of such articles, Simon Collins describes a recent consultation¹ and uses it to share some teaching points.



Mount Kilimanjaro, Tanzania (19,341 feet / 5,895 metres).

The case:

Andrew (58 years) and his sons Brian (33) and Conor (31) went to a travel agent in town last month and booked themselves into a group tour going up Mount Kilimanjaro in Tanzania. They attend the clinic together. They are leaving tomorrow! None of them have travelled previously to a developing country. They will fly to northern Tanzania from Dublin, via a 6-hour stop in the Ethiopian capital, Addis Ababa. The trip will last 12 days in total. Conor only got around last night to reading the paperwork that had been issued to them by the travel agent and, seeing a reference to Yellow Fever vaccine ("travellers entering Tanzania may be asked to show a certificate of vaccination against Yellow Fever"), the three of them have turned up as 'walk-in' patients, seeking "whatever we need to get – we're leaving tomorrow!"

Problems for the Travel Medicine practitioner:

- Do they really need Yellow Fever vaccination as an entry requirement to Tanzania?
- If they don't, what can be done to reassure them that they will not be stopped on entry?
- What vaccines can be given to them that will work in time?
- Do they need malaria prophylaxis and if so, what might be the best option?
- How can they be protected against acute mountain sickness?
- What other medicines should they be equipped with prior to travel?

Breaking the cases into manageable parts:

Vaccines:

- Childhood vaccines – had been done in the case of all three; this meant primary courses of tetanus had previously been given and that a single shot given now would act as an immediate booster. In addition, it meant that the MMR status of all three should be normal; the father being considered immune by virtue of being born prior to 1978. Both sons had received both required doses at age 1 year and age 5 years
- Yellow Fever – not an entry requirement under International Health Regulations when the trip itinerary is taken into consideration (see further note on Yellow Fever below). Not a significant health risk to them from a disease point-of-view.
- Tetanus/Diphtheria – should be done. Will work immediately.
- Polio – no risk.
- Hepatitis A – should be done. Will protect them for the trip². Although the vaccine requires 14 days to

provide circulating antibodies, the incubation period of the Hep A disease is longer than this. A dose of vaccine will effectively prevent any infection contracted on the following day (the first day of the trip) from developing into clinical illness.

- Typhoid – should be done normally but will not work for 14 days, so will contribute nothing to protecting them for this trip.
- Hepatitis B – very small risk for this trip.
- Rabies – no risk unless animal bite/scratch occurs. There are some advantages to at least one vaccine shot being done pre-travel (I will deal with this in a future issue of Taisteal) but it is not a priority for this trip.
- Meningitis – very, very small risk for this trip. Would take at least 14 days to work, so will contribute nothing to protecting them for this trip.
- Cholera – very, very small risk for this trip and would take at least 14 days to work, so will contribute nothing to protecting them for this trip.

Yellow Fever certification and entry to Tanzania:

Legally, these travellers are not required to present YF certificates on arrival in Tanzania unless they are unexpectedly delayed in Addis, en route to Tanzania and spend more than 12 hours in Addis. In reality, a recent academic paper³ found that on arrival in Tanzania, a sizable minority of travellers were (incorrectly) being asked for YF certs by individual immigration officers. The same paper found that if travellers had a YF exemption certificate, they were not denied entry.

Malaria prophylaxis:

Malaria risk is significant (in comparison to Asia and other regions) for the first couple of days prior to ascent and for the last day or two following descent. Only Atovaquone/Proguanil can be commenced one day pre-travel and it has the additional advantages of

- a) Having a lower risk of side-effects than Doxycycline and
- b) Having to be taken for a shorter period post-travel, which should lead to improved compliance in the case of this particular group.

Non-vaccinatable, non-malaria related issues to be considered:

- Acute mountain sickness ('AMS'):
This is very likely to occur; there is surely no other destination in the world where it is possible to ascend to such an altitude at such speed. Acetazolamide should at least be prescribed and carried by the travellers. Whether it should be taken prophylactically or only in response to the development of symptoms is a question which will lead to differing opinions from experts.
- Contingency planning for unexpected, non-AMS illness occurring while on the mountain – particularly gastroenteritis.

How this case was managed:

Each traveller was given:

- A Yellow Fever exemption certificate, valid for a two week period
- One dose of Tetanus/Diphtheria vaccine
- One dose of Hepatitis A vaccine
- A prescription for Atovaquone/Proguanil malaria prophylaxis, to be commenced the same day, taken daily during the trip and for seven days after returning to Ireland
- A prescription for Acetazolamide ('Diamox') and a treatment dose of the antibiotic Ciprofloxacin, both medicines to be bought in advance and brought on the trip, with the antibiotic being used in the event of pronounced diarrhoea which was not manageable with the use of Loperamide alone

Learning points:

- A Yellow Fever exemption certificate can be a useful strategy to employ, in cases where the traveller is not at risk of the disease but worried that they might encounter problems at Immigration
- Hepatitis A vaccine can be used even in the last-minute traveller
- This case serves as a reminder that much of the health gain in a Travel Medicine consultation lies not just in the administration of vaccines, but in the non-vaccine activities (acute mountain sickness prophylaxis/treatment, malaria prophylaxis)

Further reading:

NHS Scotland Travax Tanzania page:

<http://www.travax.nhs.uk/destinations/africa/united-republic-of-tanzania/tanzania/>

NHS Scotland Travax Altitude & Travel page:

<http://www.travax.nhs.uk/health-advice/general-health-advice/altitude-and-travel/>

References:

¹(Patient ages only have been changed to preserve patient anonymity; all other aspects of the story are true)

²Immunisation against infectious disease (the 'green book') Public Health England chapter 17 page 150 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/263309/Green_Book_Chapter_17_v2_0.pdf

³Schönenberger S1, Hatz C1,2, Bühler S1. Unpredictable checks of yellow fever vaccination certificates upon arrival in Tanzania. J Travel Med. 2016 Jun 13;23(5). doi: 10.1093/jtm/taw035.

Dr. Simon Collins.

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RECORDING SEC.:	ANNE REDMOND

WHAT'S IN THE JOURNALS?

TRAVEL MEDICINE and INFECTIOUS DISEASE

The most recent September issue of TMID features original articles on maritime illness and death in the United States; imported travel-related infectious diseases in South Korea; infectious mononucleosis as causes of fever in returned travellers; travellers' diarrhoea in a cohort of 98 Dutch travellers; a retrospective study of pre-travel care of immunocompromised and chronically ill travellers; a survey of European malaria prevention recommendations for travellers visiting sub-Saharan Africa; and a report on the risks to travellers attending the Grand Magal of Touba, a mass gathering in Senegal, West Africa.

I will focus on the review article in this issue of the journal, entitled 'Expected immunizations and health protection for Hajj and Umrah 2018 – an overview' (Al-Tawfiq et al.). The authors provide some interesting background information on the annual Hajj and Umrah mass gatherings. Did you know that the number of pilgrims from each country is based on a ratio of one pilgrim per one thousand population of Muslims in that country? Hajj is compulsory for all Muslims who have the financial resources but Umrah is not compulsory. About three million Hajj pilgrims travel to Mecca each year, the majority by air. Free healthcare is provided by the Kingdom of Saudi Arabia and there is an extensive health infrastructure provided locally.

The Saudi Ministry of Health issues its required vaccinations each year for the Hajj and Umrah seasons. Mandatory vaccinations include meningococcal, poliomyelitis (for some travellers) and yellow fever. Seasonal influenza vaccine is recommended, and routine vaccine recommendations include tetanus, diphtheria, pertussis, measles and mumps. Meningococcal vaccination became a requirement in 1987 following large disease outbreaks. It was expanded to the quadrivalent (A, C, Y, W135) in 2001. This has resulted in a decrease of invasive Hajj-related cases from 13 to 2 cases per year between 1995 and 2011. The polysaccharide vaccine requires to be re-dosed after 3 years while the conjugated vaccine is accepted for 5 years. The conjugated vaccine has the added advantage of being able to eliminate carriage of the bacterium and prevent outbreaks caused by returning pilgrims. Oral ciprofloxacin is given to pilgrims arriving from the African meningitis belt as an additional chemoprophylaxis. The certificate of vaccination against meningococcal disease must show that the vaccine was not given less than 10 days before arrival in Saudi Arabia.

In relation to poliomyelitis, proof is required from pilgrims coming from areas infected with wild polio virus 1 or circulating derived polio virus (currently Afghanistan, Nigeria and Pakistan) of at least one dose of inactivated polio vaccine (or oral polio vaccine in some countries), in the previous

12 months, but not within the 4 weeks immediately prior to departure. The International Health Regulations mandate that travellers to the Hajj demonstrate documentation of yellow fever vaccine if they are arriving from any one of 42 areas at risk of yellow fever transmission. It is recommended that pilgrims observe hand hygiene and cough etiquette as well as avoiding contact with camels, in an effort to prevent transmission of Middle East Respiratory Syndrome (MERS-CoV). The European CDC strongly recommends that non-immune Hajj pilgrims receive measles vaccination. The high rate of acquisition of multi-drug resistant bacteria by Hajj pilgrims is a cause for concern, and overuse of antibiotics by Hajj pilgrims is therefore discouraged.



The current November-December issue of Journal of Travel Medicine includes a variety of articles on communicable and non-communicable disease risks in travellers. Original articles include an Irish study of traveller health priorities as expressed in the pre-travel consultation; the psychological well-being of Portuguese expatriates in sub-Saharan Africa; and laboratory-based respiratory virus surveillance on Alaskan cruise ships. Interesting perspective articles discuss drug tourism and the challenges facing the obese traveller. A major review article by Joe Torresi and Robert Steffen critically imagines the future of genomic research in travel medicine. An accompanying editorial considers the prospects of personalised travel vaccination and malaria chemoprophylaxis based on genetic risk markers.

Focusing on an original retrospective study of 314 children attending an international travel health centre in Israel, a study led by Eli Schwartz examined all children presenting to the clinic between 1999 and 2015. The major destinations were South-Asia and sub-Saharan Africa. The most common diagnoses in children were gastrointestinal disease, followed by febrile diseases, including dengue and malaria. A quarter of the diagnoses in children were dermatologic. Schistosomiasis and neuropsychiatric symptoms were less common. Over 105 of the paediatric cases had eosinophilia, sometimes asymptomatic. Children who had travelled to Asia were more likely to have GI illness and skin conditions. The major modes of disease transmission were food-borne (30.9%), bite and sting wounds (10.2%), and mosquito-borne infections (8%).

If you have an idea for an original research project in travel medicine which you would like some guidance and support to develop, please contact annehredmond@eircom.net and I will get in contact with you. Merry Christmas, and healthy travels in 2018!

Prof. Gerard Flaherty

FEVER IN THE RETURNED TRAVELLER

The following is a summary of an OSKE delivered by the author at the TMSI meeting in Dublin on 11th November 2017.



A patient presenting with fever following a recent trip is challenging. In part, the clinician wants to ensure that no serious illness is missed; some potential explanations are serious, while others are not. The differential diagnosis is potentially long and can be difficult to narrow down. It's also possible that the fever is actually unrelated to the recent and is due to an illness contracted at home. It helps to have a plan for approaching the case in an organised manner, knowing some key facts about what causes fever and how to narrow the list of possible causes rapidly.

Of all possible causes, malaria is the most important. Ireland had 81 recorded cases in 2015 – not a huge number but each is a serious event, because of the ability of the condition to progress rapidly over the course of a single day. The following facts should help you decide on the odds that the case you are dealing with might be malaria-related:

- Almost all (>90%) of Irish cases are from Africa trips
- About 50% of these cases fall into the 'visiting friends and relatives while abroad' category
- Non-compliance or patchy compliance with malaria prophylaxis tablets is an invariable feature of these cases (i.e. patients who were fully compliant with malaria prophylaxis do not often present with malaria post-travel)

The absence of fever at the time that you examine the patient does not exclude the possibility of malaria being present (a significant minority of cases present with no fever).

Principles to bear in mind when assessing a fever in a returned traveller:

- Fever cause may be due to a non-travel-related cause
- Diagnosis will be harder if focal symptoms (e.g. sore throat, dysuria) are absent
- A thorough history is key, particularly:
 - Symptoms & onset dates
 - Travel dates
 - Itinerary & activities
- Formulate a differential diagnosis by piecing together the patient symptoms, date(s) of symptom onset, travel dates, travel itinerary/activities and by thinking of the diagnoses (and their incubation periods versus the patient's dates of travel) listed in Table 1.

Actions:

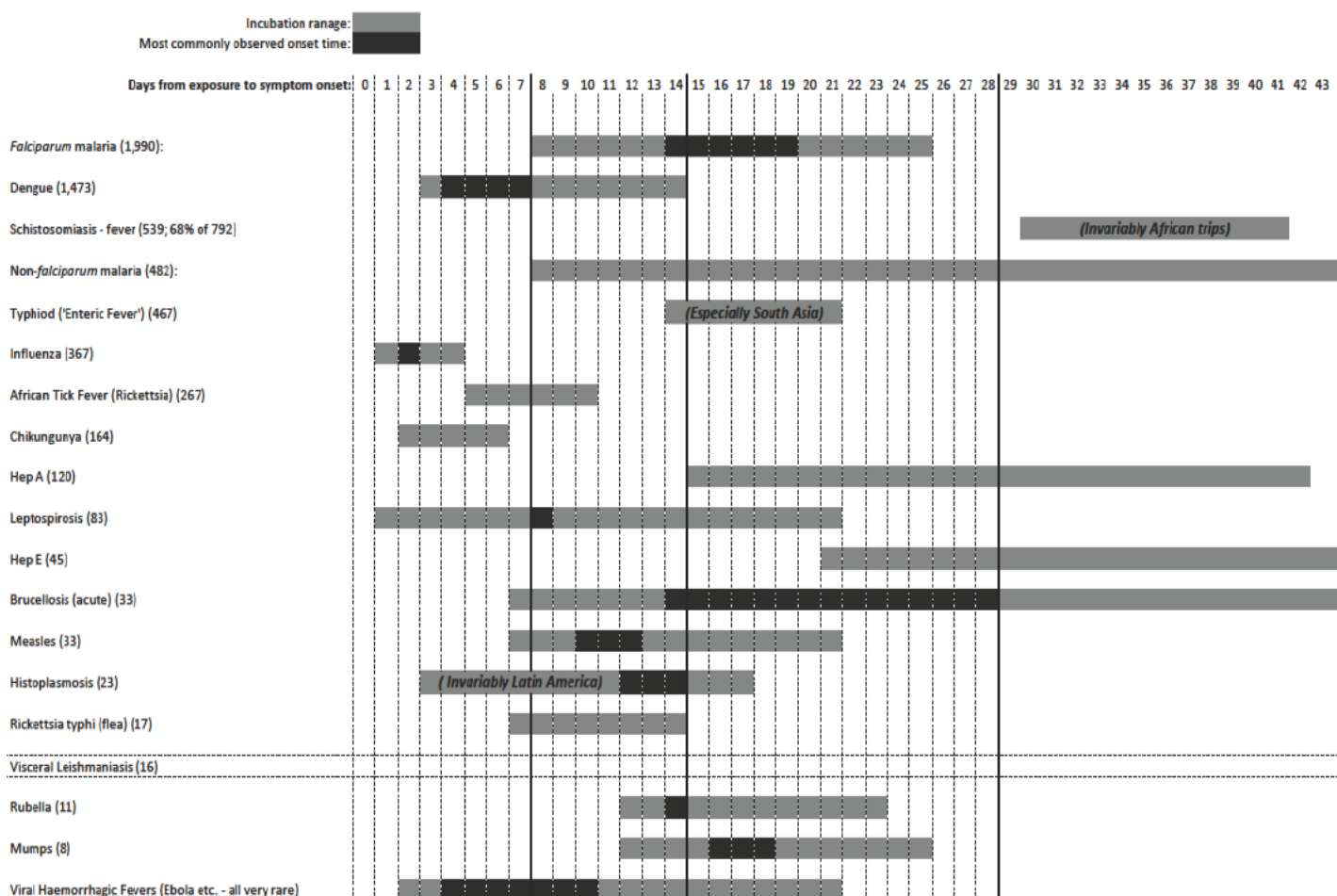
- Physical exam (thorough, including temperature, exam of oropharynx, check for cervical, axillary and inguinal nodes, careful chest auscultation)
 - For apparent intermittent fevers, ask the patient to self-record temperature, using a digital sub-lingual thermometer
 - Investigations: FBC, ESR, LFTs, urinalysis, malaria thin/thick film and if diarrhoea is present, stool for culture & sensitivity
- If malaria is part of the differential diagnosis and the patient remains unwell, then repeat thin/thick films for malaria must be done.

The infections listed in table 1 are listed in order of decreasing frequency, based on a large study of unwell travellers presenting post-travel for medical care at specialist tropical centres in Europe & the U.S. The numbers for each diagnosis are not representative of the actual frequency with which these diseases will account for fever in 'real life' – they will have been skewed by the fact that they represent the more serious and/or harder-to-diagnose cases that will have been referred in from primary care. The diagnoses listed are very helpful though in giving a sense of what in 'real life', among the exotic diagnoses, turns up more commonly and what turns up less commonly. I have inserted the bars in the chart myself, as a guide to the minimum and maximum incubation periods for the diseases listed, with the darker shading representing peak periods when certain diseases are most likely to become symptomatic.

Table 1: Incubation periods - select diseases in order of decreasing frequency. The numbers in brackets after each diagnosis are the patient numbers from a series of 42,173 unwell post-travel patients presenting to specialist clinics (Leder et al, *Ann Intern Med.* 2013; 158:456-468).

Table 1

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I think the following represent key messages from the data presented in Table 1, above:

- o Falciparum malaria (invariably 'Africa') typically presents two-and-a-half weeks post infection and invariably within a month of the infection having been contracted.
- o Non-falciparum malaria is not rare and can turn up later – a delay of symptom emergence until 5 to 7 weeks post-infection is possible.
- o Dengue (think 'Asia' and 'Latin America' especially) is always rapid-onset (typically while the patient is still on holiday, otherwise usually within 7 days of returning).
- o Schistosomiasis is a common cause of 'late' fever (i.e. in the 2nd month home; invariably post-Africa. Fever is always present; in the study quoted, fever occurred like this in about two-thirds of the Schistosomiasis cases).
- o African Tick Fever (think 'safaris in Africa') is often mistaken for malaria (by the patient and sometimes by the doctor!), because it's symptoms share some characteristics with malaria. The giveaways however are (a) usually faster symptom onset and (b) patient will report they adhered stringently to malaria prophylaxis.
- o Leptospirosis, though uncommon (83 cases in this study), should never be forgotten as a possible diagnosis, particularly in non-specific cases (lethargy, myalgia) that turn up any time in the first three weeks post-travel.

Most fevers will self-resolve and turn out to have non-sinister causes. A minority will be due to more exotic causes. Of these, malaria must not be missed and should be suspected particularly in travellers who have returned from Africa and who were not taking prophylaxis or were poorly compliant with it. Where treatment is undertaken and where an expected improvement fails to occur, the following classic triad of explanations should be remembered: misdiagnosis, drug-resistant infection and finally co-infection, where more than one type of infection is present and only one pathogen has been cured, leaving a second organism which continues to cause some symptoms (this can happen particularly with gastrointestinal illnesses).

Dr. Simon Collins.

Items for the newsletter can be forwarded to:

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Articles are always welcome

Dates for the Diary

LIVERPOOL SCHOOL OF TROPICAL MEDICINE – ONLINE TRAVEL VACCINATIONS: PRINCIPLES & PRACTICE COURSE

This new online course aims to equip new and experienced practitioners in the development of their vaccination knowledge and skills within a travel health setting. It will provide a platform of confident practice, reflection and continuing professional development (CPD) through interactive learning with subject specialists and peers – **IN YOUR OWN TIME** (within the 5 weeks, approx. 4-5 learning hours per week). Delivered by experienced clinical professionals from LSTM who have wide experience of advising global travellers and teaching health professionals about travel health. Course curriculum includes: Vaccine preventable diseases of importance to the travel health practitioner, Accessing reliable evidence based country specific vaccine information, The immune system and the interplay with vaccines, Types of vaccines, Practical aspects of administering multiple vaccines and vaccine scheduling, Application of knowledge using travel scenarios for vaccine administration, Factors that affect vaccine delivery including cold chain and traveller specific issues such as existing health problems.

See: www.lstmed.ac.uk/study/courses/travel-vaccinations-principles-and-practice

TRAVEL MEDICINE SOCIETY OF IRELAND - HALF-DAY MEETING

Date: 10 February 2018

Location: Hodson Bay Hotel, Athlone, Co. Westmeath

Time: 9:00am - 1:00pm.

Places limited. For further information, please contact Anne at 045 890 127 or annehredmond@eircom.net

TRAVEL MEDICINE SOCIETY OF IRELAND - A.G.M. & LECTURE AND WORKSHOP

Date: 21 April 2018

Location: Talbot Hotel, Stillorgan Road, Stillorgan, Co. Dublin.

Time: 9:00am - 1:00pm.

A.G.M. Members only. Lecture and workshop open to non-members.

Places limited. For further information, please contact Anne at 045 890 127 or annehredmond@eircom.net

12TH CONFERENCE OF THE ASIA PACIFIC TRAVEL HEALTH SOCIETY (APTHS)

Date: 21 - 24 March, 2018

Location: Bangkok, Thailand. 12th Conference of the Asia Pacific Travel Health Society is organised biennially.

In 2018 more than 400 professionals will come together in Bangkok, Thailand for APTHC 2018.

See: www.apths.org/

7TH NORTHERN EUROPEAN CONFERENCE ON TRAVEL MEDICINE, NECTM7

Date: 2-4 May, 2018

Location: Stockholm, Sweden (Clarion Hotel, Stockholm) See: www.mkon.nu/nectm_7

SOUTH AFRICAN SOCIETY OF TRAVEL MEDICINE (SASTM): PAN AFRICAN TRAVEL MEDICINE CONGRESS:

FOCUS ON REALITY 2018

Cape Town, South Africa. 12 September, 2018 (dates to be confirmed) See: www.sastm.org.za/

TRAVEL MEDICINE SOCIETY OF IRELAND - HALF-DAY MEETING

Date: 22 September 2018

Location: Rochestown Park Hotel, Cork

Time: 9:00am - 1:00pm.

Places limited. For further information, please contact Anne at 045 890 127 or annehredmond@eircom.net

TRAVEL MEDICINE SOCIETY OF IRELAND - FULL-DAY MEETING

Date: 10 November 2018

Location: Clayton Hotel, Liffey Valley, Dublin

Time: 9:00am - 5:00pm.

Places limited. Fee: €50.00 for members and €65.00 for non members. Mid-morning and afternoon tea/coffee and lunch included. For further information, please contact Anne at 045 890 127 or annehredmond@eircom.net