TAISTEAL

Travel Medicine Society of Ireland

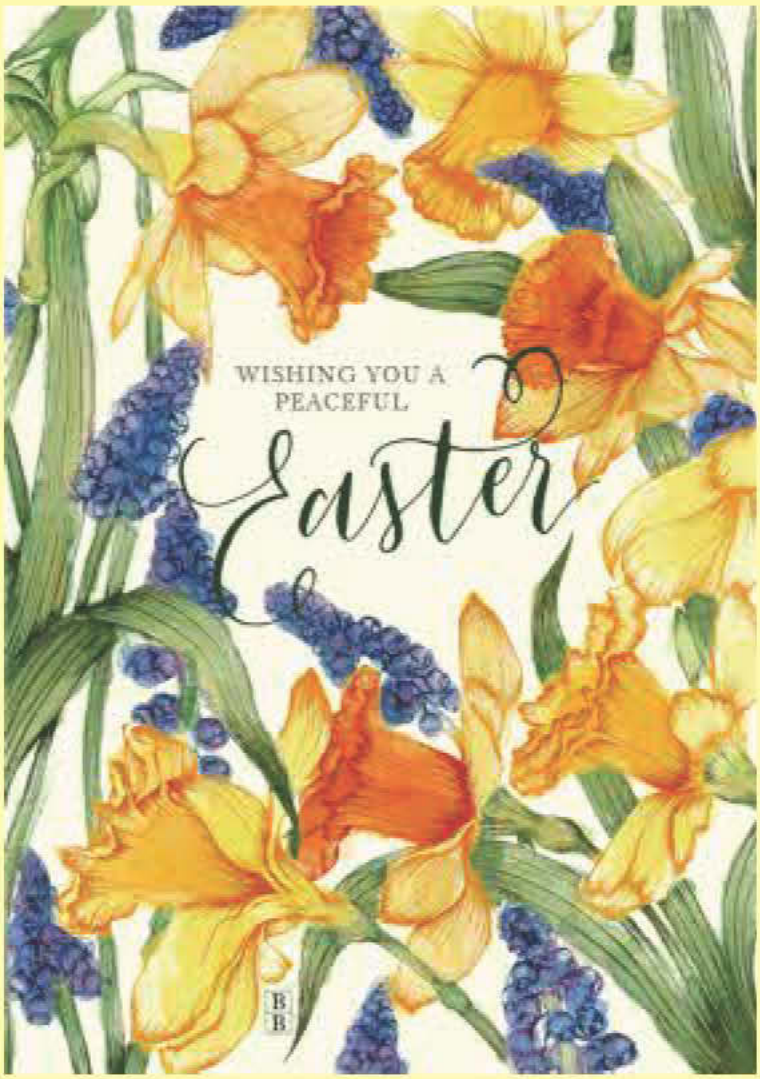
Volume 18 | Issue 1

Spring 2018

NEWSLETTER

ed. S. Collins

The Travel Medicine Society of Ireland wish all our members a Happy Easter



We look forward to seeing you in 2018

TRAVEL MEDICINE EDUCATION

Travel Medicine is a discipline that is growing in importance in an era of increasing globalisation of travel. There is a gap in the undergraduate medical curriculum in preparing medical graduates to manage travel health issues as well as provide travel health advice when they graduate. Massive open online courses (MOOCs) are designed to accommodate large numbers of geographically dispersed learners and are generally made available without cost to the learner. In collaboration with the International Medical University (IMU) in Malaysia, we are designing the world's first Massive Open Online Course in Travel Medicine for undergraduate healthcare students. It may also be suitable for doctors and nurses with an interest in travel medicine who are at an early stage of their career.

I am leading a course development team which is supported by IMU faculty and instructional and graphic designers. A meeting was held in Malaysia in November 2017 to discuss the rationale, course content and design of the MOOC. Student stakeholders from NUI Galway have also contributed feedback to guide the development process. The course conceptual design and construction began in December 2017 with content development being led by NUI Galway supported by the e-learning design team from IMU. Studio lecture recordings were completed at IMU in January 2018 and further recordings are scheduled for April 2018. A sample unit and promotional trailer will be presented to the International Academic Council in Malaysia in April 2018. The target completion date is set for December 2018. A typical MOOC takes a year to develop.
The MOOC in Travel Medicine will be delivered to two cohorts annually. This course is organised into 5 four-themed units: travel health risk assessment; pre-travel health advice; tropical infectious diseases; specialised travellers; and illness in returned travellers. Various pedagogical methods will be used to deliver the topics including short video lectures, expanded lecture notes, webinars, a discussion form and formative quizzes. The course is intended to be completed in 5 weeks (25 hours of learning). An optional Certificate of Achievement will be awarded to participants who complete a 25-question MCQ. A nominal fee will be charged for a printable certificate as evidence of course completion but otherwise the course will be completed free of charge.

Several measurable outcome metrics will be recorded once the MOOC goes live. Examples of these metrics include number of participants, number of countries represented, percentage learner course completion rate, and the level of learner interaction with the online course moderator. These metrics are made available through the platform the MOOC is being built upon - openlearning™ . There may also be opportunities for an academic research presentation and publication in a travel medicine journal.

This MOOC in Travel Medicine is made possible because of the close and longstanding twinning partnership between IMU in Malaysia and the School of Medicine at NUI Galway which has educated students from IMU in the clinical phase of its programme for over 20 years. Both institutions are united in a common objective to bridge the deficiency in the delivery of travel medicine education in undergraduate healthcare curricula using a platform that appeals to today's learners. The MOOC, once completed and live, may also be a useful adjunct to the travel medicine education TMSI members currently receive from our newsletter and attendance at our regional educational seminars and annual masterclass. I will provide updates on our progress in future issues of Taisteal.

Prof. Gerard Flaherty

EDITOR'S NOTE

As I take on the role of President at the upcoming AGM, the role of Editor of Taisteal will pass to Dr. Astrid Weidenhammer. Please feel free to submit potential pieces for publication to her.

The TMSI AGM is always a time of change and this year Dr. John Gibbons will be stepping down from his position on the committee. John is a past president of TMSI and we will miss his presence at committee meetings - thank you John for all your work and wisdom in the past few years.

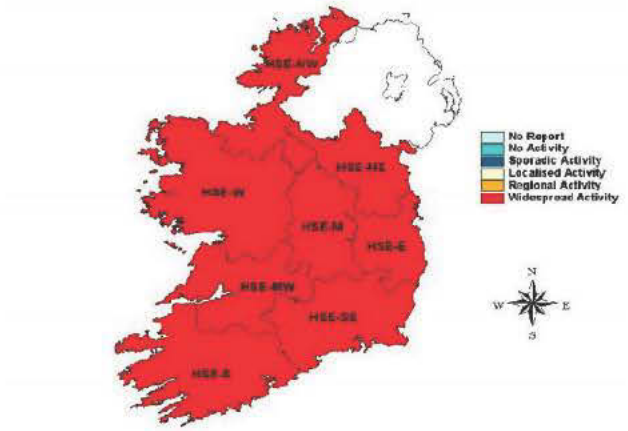
TMSI members are encouraged to put themselves forward for committee membership at the AGM - it's important that we regularly introduce fresh faces and new perspectives to the group that are striving to make wise decisions on behalf of the membership. Hoping to see as many of you as possible at Stillorgan in April.

Dr. Simon Collins

DO WE HAVE FLU IN IRELAND?

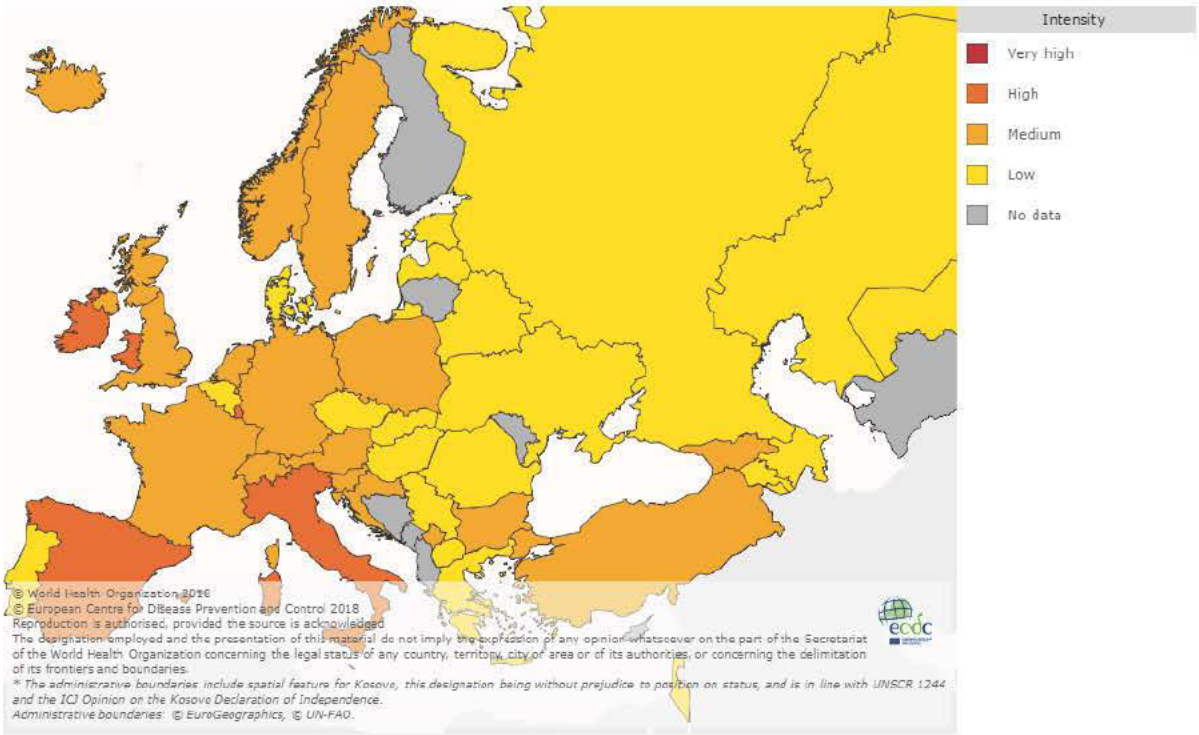
Do We have Flu in Ireland?

Yes, flu is right now circulating in all areas of Ireland:



Is Ireland the same or worse than other countries?

Ireland has more reported more cases of Flu than our neighbours. The intensity here is currently determined to be "High".



Which strain is circulating?

Influenza type B is more prevalent this year. Both in Ireland and throughout Europe. More than half of confirmed isolates were positive for Influenza type B

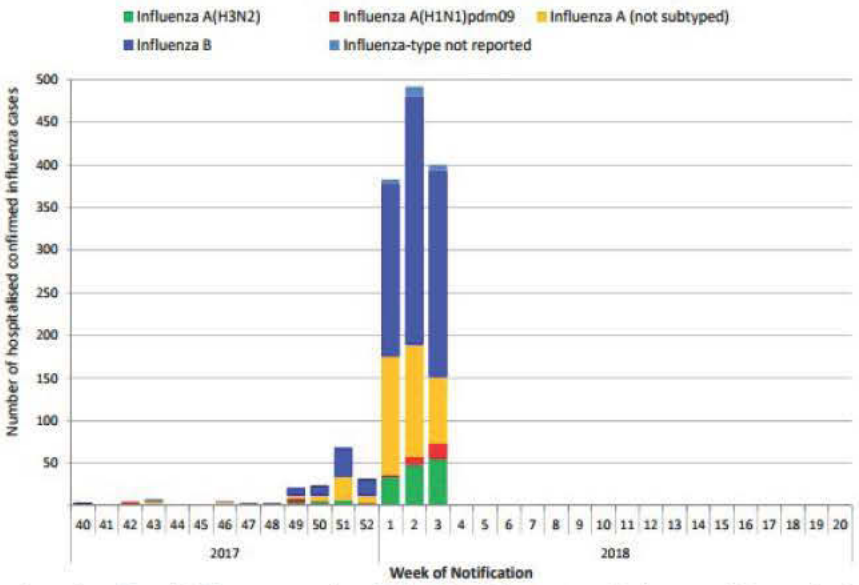
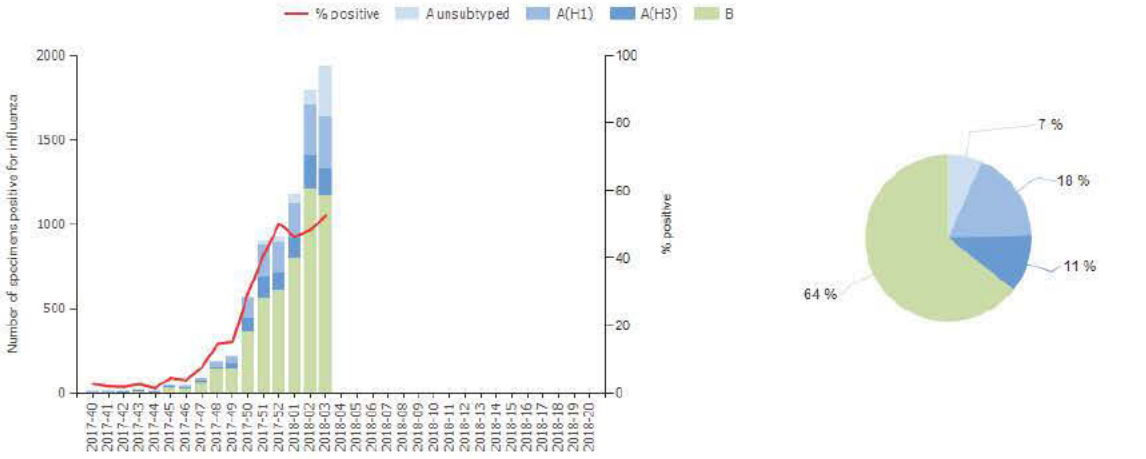


Figure 9: Number of confirmed influenza cases hospitalised by influenza type/subtype and by week of notification.
Source: Ireland's Computerised Infectious Disease Reporting System (CIDR).

Influenza virus detections in the region

Season: 2017 - 2018 Season Source: Sentinel



Is flu dangerous?

Yes! There were over four hundred people hospitalised in a single week in January, in Ireland. In the last month over one thousand people were admitted to hospital with the flu around the country, 52 of them in Intensive Care Units. The over 65s and children less than 12 months are particularly at risk. No wonder we have elective surgery cancellations and trolleys in emergency departments. Maybe those planning bed capacity might realise this is going to happen every year?

Table 3: Age specific rates for confirmed influenza cases hospitalised and admitted to critical care during the 2017/2018 influenza season to date. Age specific rates are based on the 2016 CSO census.

	Hospitalised		Admitted to ICU	
Age (years)	Number	Age specific rate per 100,000 pop.	Number	Age specific rate per 100,000 pop.
<1	46	73.9	5	8.0
1-4	90	33.4	0	0.0
5-14	87	12.9	7	1.0
15-24	57	9.9	1	0.2
25-34	69	10.5	3	0.5
35-44	91	13.8	10	1.3
45-54	107	17.1	9	1.4
55-64	147	28.9	11	2.2
≥65	759	119.0	26	4.1
Unknown Age	1		0	
Total	**1454**	**30.5**	**72**	**1.5**

Influenza Surveillance Report Page 10 of 12 25/01/2018

Should I still get the vaccine?

Yes, it's not too late, particularly if you are over 60 and have cardiac, respiratory or immune system disorders and if you are caring for these people. The Immunisation guidelines for Ireland give more details. The flu is expected to be circulating here until March.

I thought we had the wrong vaccine in Ireland?

No, the WHO makes recommendations each year for vaccine components based on circulating strains. Some tabloid papers mentioned that the Southern Hemisphere H3N2 strain was circulating here. This is true, influenza is a global disease. The current outbreak is Influenza B which is covered in this year's vaccine.

Seasonal Flu Campaign, WHO 2017/18 recommendation
Northern Hemisphere:
an A/Michigan/45/2015 (H1N1) pdm09-like virus;
an A/Hong Kong/4801/2014 (H3N2)-like virus; and
a B/Brisbane/60/2008-like virus.

Southern Hemisphere
an A/Michigan/45/2015 (H1N1) pdm09-like virus;
an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus; and
a B/Phuket/3073/2013-like virus.

What if I'm travelling?

Travellers should always consider a flu shot, particularly if they belong to a risk group. If travelling to the Southern hemisphere, consider getting a second shot of the local vaccine when you arrive, although in the Southern Hemisphere flu has now dropped to the interseason rate of transmission.

References:

1. European Centre for Disease Surveillance and Control: ecdc.europa.eu.
2. Immunisation guidelines for Ireland Chapter 11,
3. Computerised Infectious Disease Reporting on: hpsc.ie/cidr

Dr. Conor Maguire

Foundation and Diploma Courses in **Travel Medicine**

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF GLASGOW
TRAVEL MEDICINE

Foundation Course in Travel Medicine

The Foundation Course in Travel Medicine is a **six month e-learning course** suitable for those working in the field of Travel Medicine.
The course includes:

- Introductory educational training session in Glasgow (*two days, attendance required)*
- Four e-learning units with assignments

Topics covered include:

Pre-travel risk assessment
Infections and epidemiology of infection
Immunisation theory, practice and available vaccines
Malaria

Diploma in Travel Medicine (DipTravMed)

The Diploma Course is suitable for healthcare practitioners working in the field of Travel Medicine. It is delivered through a blended e-learning approach over one full calendar year.

The course includes:

- An introductory residential week in Glasgow
- Module 1: ten e-learning units with assignments
- A mid-session residential week in Glasgow including an objective structured clinical examination (OSCE)
- Module 2: ten e-learning units of self study with practical exercises
- Module 3: a project chosen by the student
- A final written examination in Glasgow.
  Overseas students can opt to sit this examination in their own country by arrangement.

Student support (applicable to both courses):
All students are allocated a personal advisor and access to the course website, TRAVAX and e-Library. Online staff/student communication is also provided.

The UK's only multidisciplinary Royal College

For more information and applications, please contact:
Applications and administration: Lesley Haldane
+44 (0)141 241 6217 | lesley.haldane@rcpsg.ac.uk

Course content and curriculum: Ann McDonald or Clare Henderson
ann.mcdonald@rcpsg.ac.uk | clare.henderson@rcpsg.ac.uk
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Royal College of Physicians and Surgeons of Glasgow
232-242 St Vincent Street, Glasgow, G2 5RJ, UK
www.rcpsg.ac.uk/travel-medicine

WHAT'S IN THE JOURNALS?

The most recent January-February issue of Travel Medicine and Infectious Disease (TMID) features original articles covering the use of smartphones to stream health data during travel; a prospective study of hepatitis A vaccine in patients with drug-induced immunosuppression; Zika virus infection in travellers returning to China; chronic arthritis post-chikungunya infection in Colombia; and an airport survey of adolescents travelling from Athens to Africa or Asia. An excellent review article updates us on colonisation of the gut with multidrug-resistant Enterobacteriaceae in travellers.

Malaria is the subject of two systematic reviews in the current issue of TMID. The first, entitled 'Abbreviated atovaquone-proguanil prophylaxis regimens in travellers after leaving endemic areas: A systematic review', evaluated data from 32 carefully selected studies involving 3,399 subjects to determine if malaria chemoprophylaxis with atovaquone-proguanil can be discontinued on the day of return from a malaria-endemic area. The authors conclude that premature discontinuation of atovaquone-proguanil may result in mono-prophylaxis with atovaquone (which has a longer half-life than proguanil) and select for plasmodia resistant to this agent. The quality of studies supporting a shorter, post-travel regimen was deemed inferior to that of studies which favour the current 7-day post-travel schedule. Additional research from studies examining the impact of abbreviated malaria chemoprophylaxis on parasitaemia levels and clinical illness are suggested before such regimens can be recommended in clinical practice.

A further review, entitled 'Time delays in the diagnosis and treatment of malaria in non-endemic countries: A systematic review', analysed data from 69 studies published between 2005 and 2017 to identify the extent of delays in the diagnosis and treatment of malaria in returned travellers. The findings reveal that median diagnostic delays of four or more days are common with patient delays in seeking treatment making up the larger proportion of delays in diagnosis. Limited data existed on the nature of medical diagnostic delay in relation to malaria. The authors acknowledge that the study was limited by the failure to include information on earlier healthcare contacts which may have overestimated patient delays. They point to the high frequency of studies which reported a clinically significant delay, which presents an increased risk for severe or fatal malaria.

The current November-December issue of Journal of Travel Medicine (JTM) includes original articles on babesiosis; health issues facing travellers to Myanmar; measles susceptibility in the migrant population; imported malaria in northern Italy; the use of empirical anti-parasitic treatment in returning travellers; travellers who use CPAP machines; imported Chikungunya cases in Japan; a retrospective analysis of live vaccine safety in patients receiving immunosuppressive or immunomodulatory therapy; use of PCR technology to identify travellers' diarrhoea pathogens; and a Geo-Sentinel network analysis of illness in business travellers. Our group at NUI Galway also published a review article entitled 'Protecting the health of medical students on international electives in low-resource settings'. I reproduce with permission below a table we included which provides a checklist of the key preventive measures to be taken when preparing this vulnerable group of international travellers. This may be of interest to TMSI members who work with medical or other healthcare students travelling abroad to gain clinical experience.

Table1. Pre-departure checklist and web-based resources for medical students (modified with permission from Johnston N, Sandys N, Geoghegan R, O'Donovan D, Flaherty G. Protecting the health of medical students on international electives in low-resource settings. J Travel Med. 2017, 1-9. doi: 10.1093/jtm/tax092).

Pre-departure checklist		Web-based resources	
Topic	Points for discussion	Organisation	Website
Host country	Location of home country embassy within host country Consider registration with Ministry of Foreign Affairs in home country Currency Cultural differences such as appropriate dress Risk of crime, natural disasters, political instability, travel hazards	UK government US Passports and International Travel Centers for Disease Control British Medical Association	https://www.gov.uk/foreign-travel-advice https://travel.state.gov/content/passports/en/alertswarnings.html https://wwwnc.cdc.gov/travel/ https://www.bma.org.uk/advice/career/goingabroad/medical-electives
Host facility	Common health conditions including HIV prevalence Role of medical student within hospital, level of supervision and support Availability of medications and personal protective equipment Accommodation Electricity supply Food and water availability	UNAIDs Responsible Electives (Dundee Medical School)	http://www.unaids.org/globalreport/HIV_prevalence_map.htm https://blogs.cmdn.dundee.ac.uk/responsible-electives/
Supports from student's medical school	Pre-departure preparation - personal health, cultural and language competency, and ethical considerations HIV prophylaxis Medical indemnity insurance Contact details for medical school representative in case of emergency Contact other medical students who have already been on same elective	Student British Medical Journal Association of American Medical Colleges BMA Ethics and Medical Electives in Resource-Poor Countries: a Toolkit MedSin Policy on Ethical Electives	http://student.bmj.com/student/section/careers/electives.html https://www.aamc.org/download/181690/data/guidelinesforstudentsprovidingpatientcare.pdf https://www.bma.org.uk/advice/career/going abroad/medical-electives-ethics-toolkit https://medsinblog.files.wordpress.com/2016/10/ethical-electives.pdf
Travel insurance	Should cover any anticipated activities while on elective Should cover medical evacuation, expatriation and repatriation	Medical Protection Society	http://www.medicalprotection.org/uk/for-members/students/electives
Vaccinations	Attend travel medicine clinic and enquire about local vaccination preventable diseases Vaccinations may include: hepatitis A, hepatitis B, tetanus booster, typhoid meningococcal ACWY, oral cholera, rabies, yellow fever Allow several months for some vaccination schedules	Centers for Disease Control National Travel Health Network and Centre	https://wwwnc.cdc.gov/travel/ http://www.nathnac.net/

Sun advice	Pack adequate amounts of sunscreen, apply frequently Avoid peak sun hours at midday by wearing long clothing or staying in shaded areas Stay well hydrated	Fit for Travel UK	http://www.fitfortravel.nhs.uk/home.aspx
Road safety advice	If driving, ensure vehicle is road worthy. Do not use telephone while driving Avoid driving under the influence of alcohol or drugs Avoid driving in unfamiliar areas or night travel Avoid unsafe vehicle such as overcrowded vans, buses or trams	Fit for Travel UK	http://www.fitfortravel.nhs.uk/home.aspx
Water safety advice	Be aware of dangerous water dwelling animals (crocodiles, snakes, hippos, sharks, jellyfish) in the area Do not swim alone or under the influence of alcohol or drugs Wear floatation device when boating	Fit for Travel UK	http://www.fitfortravel.nhs.uk/home.aspx
Personal safety advice	Respect local dress codes Conceal valuables including phones, money, wallets and cameras Stay in well-lit areas Avoid traveling at night and using unsafe forms of transport including motorcycles, overcrowded minibuses or backs of trucks Carry photocopies of important documents and store scanned copies online Do not accept food or drinks from strangers	Centers for Disease Control Travelers' Health US Passports and International Travel Fit for Travel UK	https://wwwnc.cdc.gov/travel/ https://travel.state.gov/content/passports/en/alertswarnings.html http://www.fitfortravel.nhs.uk/home.aspx
Mental health advice	Stress management skills Eat and sleep well Get adequate exercise Implement buddy system Regular contact with friends, family or medical school colleague/mentor Debriefing session upon return If underlying mental health issue, bring adequate medication and documentation of condition	Fit for Travel UK	http://www.fitfortravel.nhs.uk/home.aspx

In the next issue of Taisteal, I will report on an original article which we have had accepted for publication in Journal of Travel Medicine, and which describes the deaths of international visitors to the Cliffs of Moher over a 25-year period. It raises the spectre of suicide tourism, the growing issue of dangerous self-photography and the need for specific personal safety advice which is relevant to particularly hazardous tourist environments.

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. You may have had an interesting case or an observation which you would like to share and this can sometimes be communicated as a letter to the editor to TMID or JTM in 500 words or less.

Prof. Gerard Flaherty

MISTAKES TO AVOID IN TRAVEL VACCINATION

The more you work in a particular branch of medicine, the more background reading you find yourself doing and in turn this can lead to the realisation that the habits of daily clinical practice are not always based on good practice. A lack of training and re-certification for Travel Medicine providers in Ireland means that one can be at risk of making fundamental errors in daily vaccination practice without being aware of them – unless you're reading the national guidelines regularly and looking for aspects in your daily work that might diverge from best practice. As a quick test of your current knowledge, take the following six-question test before reading further:

		I AGREE:	I DISAGREE:
1	In an adult, if you have to give a lot of vaccine shots on one visit, it is allowed to use the gluteal (buttock) area if you run out of sites to use in the arms		
2	Babies under 12 months of age should be given I.M. vaccine shots using the shorter-length (16mm) orange needle rather than the longer-length (25mm) orange needle.		
3	If you're giving an I.M. vaccine shot to a woman who weighs 95kg, the best needle type to use is either blue (i.e. 30mm length) or orange (25mm length version).		
4	There is not enough alcohol in an alcohol swab to stop a Yellow Fever vaccine working if you swab a site 10 seconds before vaccinating the patient.		
5	An average 21 year-old attends you three weeks before a short Thailand holiday. There is a shortage of both Hep A vaccine and Hep A-Typhoid (combined) vaccines. Giving the patient one shot each of Revaxis, Typhoid and Twinrix is a smart option; they won't be fully protected for Hep B but apart from that, they are at least sorted for the trip for Tetanus, Diphtheria, Polio, Hep A and Typhoid.		
6	The most recent rules about intervals between live vaccines mean you're not allowed any more to give MMR vaccine and Yellow Fever vaccine on the same day		

I'll deal with question 5 before the remaining questions, all of which are answered in chapter 2 of the Immunisation Guidelines for Ireland (https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/). The main point in question 5 is that 'Twinrix' (Hep A/B combined vaccine – GSK) contains 720 IU of Hep A vaccine plus 20 mcg of Hep B vaccine. By contrast, Hep A vaccine ('Havrix' – GSK) contains 1,440 IU of Hep A vaccine; Hep B vaccine ('Engerix B' – GSK) contains 20 mcg of Hep B vaccine. This means that one dose of 'Twinrix' is insufficient to provide full Hep A protection on its own (during 2017, in the wake of Hep A vaccine shortages in England, Public Health England gave permission for practitioners to administer lower doses of Hep A vaccine to patients as a temporary measure but this was an exceptional derogation from the norm). The answer to question 5 should be 'I disagree'.

Questions 1 – 4 should all have been answered 'I disagree'. A reading of chapter 2 of the Immunisation Guidelines for Ireland will reveal that:

- vaccines should never be administered in the gluteal area
- the 25mm orange needle (as opposed to the short, 16mm version) should be used for most i.m. injections
- a 40mm length (effective a green) needle should be used to administer i.m. vaccines to women who weigh more than 90kg
- if skin is swabbed with alcohol prior to the administration of a live vaccine, at least 30 seconds should be allowed to elapse prior to vaccine administration

Question 6 is something of a trick question. The answer is 'I disagree'; table 2.5 in chapter 2 of the Immunisation Guidelines does say that ideally the MMR and Yellow Fever vaccines should be administered one month apart; but a footnote under the table confirms that both vaccines can be administered on the same day if necessary, as long as an extra dose of MMR vaccine is administered at a later date.

Safe and competent daily practice in Travel Medicine is built on the foundation of the information contained in chapter 2 ('General Immunisation Procedures') and chapter 3 ('Vaccination of Immunocompromised Patients') in *the Immunisation Guidelines*. Core aspects of vaccine administration involve being clear about:

- Site of injection (deltoid, thigh, other?)
- What needle type (brown 26G, orange 25G 16mm version, orange 25G 25mm version, blue 23G, green 21G)
- What method of administration (IM vs. SC vs. ID)
- Live vs. inactivated vaccines
- Live vaccine rules (including what defines 'immunosuppression')
- Egg-containing vaccines
- Aluminium-containing vaccines

Site of injection:

- Birth to 1 year: thigh
- 1 year – 3 years: thigh or deltoid
- 3 years and older: deltoid

Needle type & method of administration:

Needle type:	**Method of administration:**	**Vaccine:**
Orange – long (25mm; all ages) with 1 exception: Men over 118kg and women over 90kg – use **green needle.**	I.M. (90°)	• (Most vaccines that are not listed below)
(Needle already on vaccine and can't be changed)	I.M. (90°)	• Influenza • Tick Borne Encephalitis
Orange – short (all ages)	S.C. (45°)	• Yellow Fever
Orange – short (all ages)	I.D. (10°)	• I.D. version of Rabies

Live vaccines:

Vaccine type:	Comments:
Live: • Yellow Fever • MMR • Varicella • (BCG) • (Oral Typhoid – 'Vivotif' – but not the injectable Typhoid vaccines normally used in Ireland)	Do not administer to those who are: • Pregnant • Immunosuppressed* Observe the live vaccine time interval rules (see table 2.5 in chapter 2 of the 'Immunisation Guidelines for Ireland'). When more than one live vaccine is being done simultaneously, administer in separate arms Don't prep skin with alcohol pre-injection and if you do, wipe it off and allow it to evaporate for 30 seconds before vaccinating.

*It's really important to be clear about what defines 'immunosuppression'. This is dealt with in chapter 3 of the Immunisation Guidelines for Ireland and I wrote an article in the Winter 2016 issues of Taisteal (pp.4 – 6), going into detail on the rapidly-expanding range of 'biologicals' being prescribed to patients (e.g. Humira, Infliximab and related drugs).

Egg-containing vaccines:

Vaccine type:	Comments:
Egg-containing: • Yellow Fever • 2 of the 3 brands of Rabies vaccine: 'Rabies BP' and 'Rabipur' (but not 'Verorab') • Influenza • Tick-Borne Encephalitis • One brand only of Hep A ('Epaxal' – a U.K. brand not normally in use in Ireland)	Do not administer to those who are: • Egg allergic

Aluminium-containing vaccines:

Vaccine type:	Comments:
Aluminium-containing: • All Tetanus-containing (DiTe, Revaxis, Boostrix, IPV-Boostrix) • All Hep A-containing (Hep A, Hep A/B combined) except 'Epaxal' (a U.K. brand not normally in use in Ireland) • All Hep B-containing (Hep B, Hep A/B combined) • Japanese Encephalitis ('Ixiaro') • Tick-Borne Encephalitis	Where possible, administer aluminium-containing vaccines in separate arms (however, this is not an absolute requirement)

(This article is based on an OSKE delivered at the 10th February 2018 TMSI meeting held in Athlone).

Dr. Simon Collins

TRAVEL MEDICINE SOCIETY OF IRELAND

AGENDA A.G.M. Lecture & OSKE Session
Saturday 21st April 2018
Merrion II & III Suite, Talbot Hotel, Stillorgan Road, Stillorgan, Co. Dublin

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A.G.M. of the Travel Medicine Society of Ireland – Members Only

8.45 a.m.	**Registration**		
9.00 a.m.	**Out-going President's Address**	**–**	**Dr Conor Maguire**
	In-coming President's Address	**–**	**Dr Simon Collins**
	Apologies & Attendance		
	Approval of minutes	**–**	**AGM 29th April 2017**
	Report by Hon. Secretary / Hon. Treasurer	**–**	**Mrs. Anne Redmond**
	Election to Executive Council		
	Presidents business		
	Any other business		
	Date of next Annual General Meeting	**–**	**2019 TBA**

* * * * *

LECTURE - OPEN T O ALL

10.00 a.m. **Presentation of the Dom Colbert Essay Prize by the winning author**

10.30 a.m. - 10:50 a.m. **Tea / Coffee**

10.55 a.m. - 11:55 a.m. **OSKE Session 3 x 20 minutes**

Vaccination case studies	**-**	**Nr. Siobhan Grehan**
Emerging travel risks in North America	**-**	**Dr. John Gibbons**
Duties and responsibilities of a yellow fever clinic	**-**	**Dr Conor Maguire**

12.00 a.m. **Introduction of Guest Speaker Dr. Graham Fry - Dr Simon Collins**
Lecture entitled: "Current cunundrums in travel medicine"

Vaccine News and Updates.

1.00 p.m. **Concludes**

* * * * *

Graham Fry is a founder member of the Travel Medicine Society of Ireland. In 1988 he founded the Tropical Medical Bureau, which began as a small vaccination clinic based in Dun Laoghaire. Their second clinic opened in Grafton Street in 1992 and since then TMB has undergone major growth and expansion to currently encompass 22 clinics nationwide (four base clinics and 18 associate clinics). Not only are they Ireland's largest vaccination clinical group, they are also the 5th largest in the world.

Recognised for CPD & Catogary 1 approval for nurses

VACCINE NEWS AND UPDATES.

There is currently a worldwide shortage of Yellow Fever vaccine. Thankfully we have been spared in Ireland. Brazil is experiencing a spread of the disease where areas previously deemed to be clear have recently reported cases. Rio de Janeiro and San Paolo which were disease free for many years, now advise vaccination. There is also increased Yellow Fever circulating in Africa. Many countries worldwide, including Ireland have issued warnings to travellers and have instigated enhanced surveillance of returning travellers. Sanofi Pasteur Ireland has given assurances that there should be no interruption in supply of Stamaril™ here.

The USA and Canada continue to experience severe shortages of Yellow Fever vaccine. The leading brand there is YF-Vax™ . Vaccine deliveries have been limited to named clinics and the supply does not meet the demand. Sanofi Pasteur have commenced supplies of Stamaril™ to the USA on a temporary licence.

To overcome emergency shortages, the WHO has announced that, where vaccine shortages exist, fractional doses may be used (1).

If a traveller must travel to an endemic area, during an outbreak of Yellow Fever, and a full dose cannot be located after reasonable efforts, a fractional dose may be administered. The dose should be 1/5 of the usual dose (0.1 ml instead of 0.5 ml) administered by the subcutaneous route. All vaccine doses must be used within one hour of reconstitution.

As with a full dose, a fractional dose is considered protective from 10 days after it is administered to a person who has never before received the yellow fever vaccine and can be expected to confer immunity for one year. This is an off-label use and must not be used routinely. It is only intended for emergency outbreaks where vaccine supplies are in short supply. A person receiving a fractional dose is not entitled to a certificate of Yellow Fever vaccination but could travel safely with a certificate of exemption stating that a fractional dose was administered. That person should receive a full dose at the earliest opportunity and can only then be issued with a certificate of vaccination (1,2). Further research is needed to determine the duration of immunity.

Yellow Fever vaccine is unusual in that it is routinely given by the subcutaneous route (3). Other vaccines can be given by the intradermal route. Rabies vaccination 0.1ml given intradermally has been proven as effective as 0.5ml intramuscularly. Further research into the use of fractional doses of Hepatitis B, Influenza and many more is ongoing and showing promise (4). Vaccinators should not use intradermal vaccinations unless they are confident of the technique. Failure could mean the vaccine being deposited subcutaneously or into subcutaneous fat and result in a failed vaccine and unprotected traveller. Novel delivery methods, such as microfine injectors and microneedle patches are in development.

Sanofi Pasteur has also announced a moderate increase in the price of their products in Ireland with discounts for bulk purchases. You may have received a notice already.

GSK Vaccines against Typhoid have been in short supply. Typherix™ has not been available since 2013 and Hepatyrix™ has not been available since 2016. GSK announced that these vaccines will not be returning to market due to reprioritising of their manufacturing facilities. Production has already been suspended and supply will end when current stocks are exhausted. The licence in Ireland will be withdrawn on the first of March. Supplies of other typhoid vaccine are not currently under threat, Typhim™ and Viatim™ continue to be available and Sanofi Pasteur Ireland does not anticipate shortages of any of their brands in the near future.

Vaccines are a rapidly evolving landscape. Many new vaccines are planned, and new information is constantly emerging. The national immunisation guidelines for Ireland are being constantly revised and new information is being added. Chapter 5 on travel has recently been updated and Chapter 3 on vaccinating the immunosuppressed will soon be published.

Dr. Conor Maguire

References:

1. http://www.who.int/mediacentre/news/statements/2016/yellow-fever-vaccine/en/
2. http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/16vol42/dr-rm42-8/assets/pdf/16vol42_8-ar-02-eng.pdf
3. Vaccine summary of product characteristics on www.medicines.ie
4. Intradermal delivery of vaccines: http://www.who.int/bulletin/volumes/89/3/10-079426/en/

STANDBY EMERGENCY TREATMENT OF MALARIA

What is standby emergency treatment (also known as emergency self treatment) of malaria?

Standby emergency treatment (SBET) refers to treatment of malaria by travellers who have either not used chemoprophylaxis or whose chemoprophylaxis has failed. The traveller is given a treatment course of antimalarial drugs to take if a febrile illness occurs after exposure in a malaria-endemic area when expert medical assistance is not readily available. It should only be recommended for travel to low-moderate risk remote areas where the traveller is unlikely to be able to access medical attention within 24 hours.

When was standby emergency treatment of malaria introduced?

SBET was first recommended to Swiss travellers visiting Thailand in 1988. It remains more common in Europe than in the USA or elsewhere.

Why not just prescribe chemoprophylaxis for all travellers visiting malaria-endemic areas?

Some regions have too low a risk of malaria transmission to warrant chemoprophylaxis in all travellers. Additionally, traveller compliance with chemoprophylaxis may be suboptimal owing to adverse effects and inconvenience. Long courses of antimalarial drugs may be prohibitively expensive for some travellers. Furthermore, malaria parasite resistance to antimalarial drugs is a potential risk if they are overused.

When should malaria chemoprophylaxis be used?

Decisions on malaria chemoprophylaxis depend on the risk of falciparum malaria during travel. SBET is not a substitute for chemoprophylaxis, which should still be used in addition to mosquito bite avoidance for travel to high risk areas (e.g. sub-Saharan Africa), or by travellers with a high risk of developing malaria-related complications (e.g. pregnant travellers).

What is the role of insect bite precautions?

Insect bite avoidance is the mainstay of malaria prevention measures. In the case of travel to regions with low risk of exposure and of less than 6 days duration, insect bite avoidance alone may reasonably be recommended to prevent travellers' malaria.

What makes a destination high risk for travellers' malaria?

There is controversy about the precise definition of risk of malaria transmission but some authorities suggest that high risk may be defined as a risk of 1:100 or higher per month of stay. Previous research demonstrated a monthly incidence of malaria in travellers not taking chemoprophylaxis in West Africa of 24.2 per 1000, for example.

Which countries are low risk for malaria transmission in travellers?

Owing to excellent global malaria control and elimination efforts, the epidemiology of malaria has changed such that fewer countries are now considered high risk for malaria transmission in travellers. Very few travellers to Asia now require malaria chemoprophylaxis, for example. The travel medicine practitioner should be familiar with up-to-date malaria distribution maps in advising travellers visiting countries which are endemic for malaria (Figure 1). The risk of malaria remains high in sub-Saharan Africa and Papua New Guinea.

Figure 1. Current malaria distribution in India (Source: http://www.fitfortravel.nhs.uk/destinations/asia-(east)/india/india-malaria-map.aspx).

Will standby emergency treatment address the problem of relapsing vivax malaria?

Relapsing malaria which occurs weeks or months after travel is not prevented by SBET. This is predominantly due to Plasmodium vivax and requires primaquine to eliminate residual hepatic forms of the malaria parasite (hypnozoites).

How should the traveller self-diagnose malaria?

Always provide travellers with written instructions on how to use SBET. They must be informed that malaria usually presents with a fever of 38°C or higher. Drenching night sweats are common. Beyond this, the traveller should not be expected to self-diagnose malaria with any accuracy. Malaria rapid diagnostic tests may be used in some cases but they are prone to both false positive and, more dangerously, false negative results.

Should we take the minimum incubation period of malaria into account?

The minimum incubation period of falciparum malaria is 6 days so that SBET is not indicated for stays of <6 days in a malaria-endemic area.

Is standby emergency treatment of malaria cost effective?

Probably not, but it is hard as a doctor to place a monetary value on human life. According to the average incidence of acquiring falciparum malaria across South East Asia of 0.4 cases per 100,000 visits, the number of SBET treatments needed to treat one case of falciparum malaria would be approximately 200,000 doses. The number of treatments to be carried to prevent 1 death (at a 1% case fatality rate) would be 20 million doses. At an approximate cost for SBET course of €40, the cost of avoiding a single death would therefore be €800 million. Based on more recent data for the incidence of P. falciparum malaria in SE Asia, the current cost would be 17 times higher than this figure!

Are there differing views on the appropriateness of standby emergency treatment?

Yes. Chemoprophylaxis is still preferred by the Centers for Disease Control and Prevention in the USA, while SBET has expanded from Switzerland to other European countries such as Germany, Austria and the Netherlands, where it is used for travel throughout much of South East Asia and South America.

What standby emergency treatment regimens are in current use?

SBET regimen	Components	Adult dosage
Artemether + Lumefantrine	Artemether 20mg Lumefantrine 120mg	4 tablets initially with food, followed by 4 tablets each given at 8, 24, 36, 48 and 60 hours. Total of 24 tablets over 60 hours.
Atovaquone + Proguanil	Atovaquone 250mg Proguanil 100mg	4 tablets as a single dose on each of 3 consecutive days
Quinine + Doxycycline	Quinine 300mg Doxycycline 100mg (use Clindamycin 150mg in pregnancy)	Quinine x2 tablets 3 times a day for 3 days, with Doxycycline x1 tablet twice daily for 7 days (or Clindamycin 3 tablets 3 times a day for 5 days in pregnancy)

Is there a simple algorithm I can follow in making decisions about SBET vs. chemoprophylaxis?

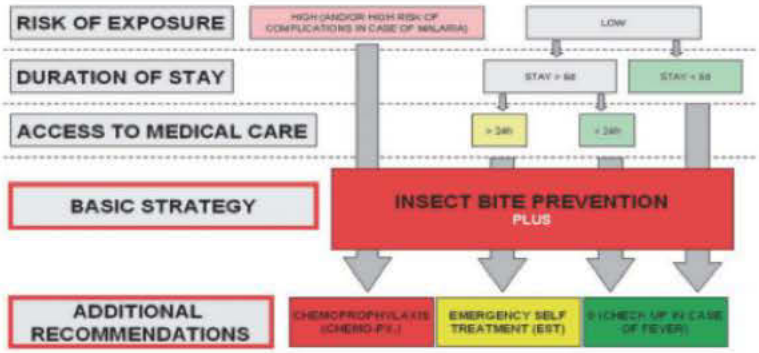

Figure 2. Malaria prevention in travellers (Source: Haditsch M. Malaria prevention – keep it simple and logical. J Travel Med. 2016, 1-2.)

Recommended reading:

Behrens R. Standby emergency treatment of malaria for travellers to low transmission destinations. Does it make sense or save lives? J Travel Med. 2017, 1-2.

Dennis Shanks G. Standby therapy to prevent Plasmodium falciparum infections? J Travel Med. 2014; 21(1):70-71.

Flaherty GT, Walden LM, Townend M. Travel medicine physician adherence to guidelines for the emergency self treatment of malaria. J Travel Med. 2016, 1-3.

Haditsch M. Malaria prevention – keep it simple and logical. J Travel Med. 2016, 1-2.

Public Health England. Guidelines for malaria prevention in travellers from the UK: 2017.

Prof. Gerard Flaherty

MELIOIDOSIS

Melioidosis = Whitmore's Disease
Infection caused by Burkholderia pseudomallei – a gram negative bacteria.The bacterium is found in contaminated soil and water.

Pathologist Captain Alfred Whitmore 1st described Melioidosis as a "glanders-like" disease among morphia addicts in Burma in 1911.

Can infect humans and animals – especially horses, sheep, goats, cats, dogs, camels, but also birds and marine mammals although water buffalo & crocodiles are thought to be fairly resistant.

Transmission: Inhalation of contaminated dust or droplets (aerosolized form).

Direct contact e.g. through skin abrasion / laceration.

Ingestion of contaminated water contaminated diary products.

Human-human spread possible but rare.

Predominantly a disease of tropics particularly SE Asia and Northern Australia but also other parts of Asia, Caribbean and Central America and less commonly in some parts of Africa and Middle East.

Incubation period: varies from frequently 1 day to 21 days but cases known to present years after exposure. Generally symptomatic within 2-4 weeks post-exposure.

Risk groups: Occupations e.g. Vet, HCW, Agricultural workers

Medical conditions e.g. DM, CCF, Liver / Renal Diseases, Cancer, Non-HIV immunosuppression, chronic lung diseases.

Medications e.g. steroid & immune-suppressants.

Clinical presentation: acute or chronic; different forms:

Localised eg cellulitis; ulceration; abscess.

Pulmonary e.g. pneumonia; pulmonary abscess.

Septicaemia

Disseminated e.g. brain (encephalitis), joints, eyes, heart, liver, spleen. Suppurative parotiditis can occur in paediatrics cases.

An emergent disease. Increasing cases worldwide – possibly related to increased global travel; immigration from endemic regions; animals importation e.g. pets.

Diagnostic Tests:
Isolation of bacteria in culture is gold standard; e.g. sputum, blood, urine, skin lesions.
Serological tests – can have false results e.g. cross-reactivity with other organisms & also occasional sero-negative cases.

Treatment:
2 weeks of IV antibiotics eg ceftazidime QDS or Meropenem TDS followed by 3-6 months of oral antibiotics eg Doxycycline or Trimethoprim-Sulfamethoxazole.

Long term combination therapy required if more severe infection.

Surgical resection of abscess may sometimes be required e.g. lobectomy for lung abscess.

No vaccine to date but novel vaccine under development.

Prognosis: Fatal if untreated; variable mortality rate between 10% & 40%.
Factors influencing disease severity: host immunity; forms of disease (localized vs disseminated); strains of bacteria; medical care available. Recurrence can occur after what appears to be successful course of treatment – usually from reactivation rather than new infection.

Biological warfare / Bioterrorism:
Biological attack – intentional release of biological agent to cause illness or death in people, animals or crops.

Both B. mallei and B. pseudomallei are potential biological warfare agents, especially B. mallei.
- Aerosolized form; highly infective; high mortality rate; wide range of hosts; intrinsic resistance to antibiotics.

Dr. Joseph Sim
TMSI Meeting
10-2-2018

Items for the newsletter can be forwarded to:

astrid@travelhealth.ie

or

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THE PREGNANT AND BREASTFEEDING TRAVELLER

Introduction:

The consultation with a pregnant or breastfeeding traveller always poses some challenges. Not only are certain vaccines to be avoided during pregnancy and options for Malaria prophylaxis limited, but also additional risks are associated with pregnancy which would not apply to a non-pregnant traveller.

Two questions to be discussed with the pregnant woman are:

Can trip be postponed until after pregnancy or at least until second trimester?

Can destination be changed?

- Destinations with risk of YF are problem as live vaccines to be avoided
- Destinations with risk of P.falciparum pose risk of contracting Malaria

Travelling itself does in most cases not increase the risk of complications during pregnancy, but some points should be considered prior to travel:

All pregnancies:

- Importance of travel insurance (which covers pregnancy and child if born abroad)
- Check medical care abroad
  (Suboptimal obstetric and medical care in many developing countries)
- Review symptoms which require immediate care
- Get 'Fit to travel' Note from GP and /or Obstetrician
- Ideally get scan before travel to ensure viability of pregnancy and confirm gestation

First trimester pregnancies:

- Risk of miscarriage:
  In many developing countries there can be deficiencies in operator ability, anaesthetic skills, post OP care, medication availability as well as an increased risk of blood borne virus infections. The psychological stress associated with a miscarriage, even more when occurring abroad, needs to be addressed.

Third trimester pregnancies:

- Complications, e.g. antepartum haemorrhage

The following table shows absolute and relative CI to travel:

Absolute CI to travel:	**Relative CI to travel**
cervical insufficiency, pre-eclampsia, premature rupture of membranes, placental abruption, suspected ectopic pregnancy vaginal bleeding	hx of miscarriage Ectopic Pregnancy or infertility, Multiple gestation

Vector-borne diseases:

Expecting mothers have an increased risk of insect bites. Therefore they should be diligent in applying insect bite prevention measures like staying indoors between dusk and dawn, wearing protective clothing, applying 50% Deet (higher percentages are not recommended) and sleeping under a mosquito net.

1. Malaria

Pregnant women have an increased risk of severe Malaria and a higher risk of fatality compared to non-pregnant women, e.g. it may result in premature labour or miscarriage, maternal death, stillbirth or low birth weight. Also the risk of complications associated with Malaria is higher in an expecting mother (severe anaemia, hypoglycaemia, jaundice, renal failure, hyperpyrexia and pulmonary oedema).

Due to placental sequestration of parasites, diagnosis of Malaria can be more difficult.
The table below shows which Malaria prophylaxis can be used during pregnancy, breastfeeding or prior to conception.

	Pregnancy	**Breastfeeding**	**Pregnancy planning**
Chloroquine and Proguanil	Safe in all trimesters of pregnancy. Drug-resistant *P.falciparum* Proguanil: take 5 mg folic acid		
Mefloquine	Caution in first trimester justified in high risk areas), can be used in all trimesters. 'Adverse fetal outcomes unlikely'(Database 1986-2010)	Safe to use	Wait for 3/12 after finishing course
Doxycycline	CI in pregnancy, can be used in first trimester if other options unsuitable. Course of Doxy incl 4/52 afterwards must be finished before 15/52 gestation	ACMP advises against use in Pregnancy and should not be used unless there is no alternative agent CDC says its compatible with BF!!	Wait for 1/52 after finishing course
Atovaquone/Proguanil	Lack of evidence of safety in pregnancy If there are no other options it may be used in 2nd and 3rd Trimester Inadvertently intake of A/P during or just prior to first trimester no indication for abortion	Absence of data therefore not recommended but can be used if there is no alternative available	Wait for 2/52 after finishing course

2. Zika

Scientific consensus is that infection with Zika virus during pregnancy is a cause of foetal microcephaly and other congenital abnormalities.
It is recommended to postpone non-essential travel to areas with current Zika transmission until after pregnancy.

Useful resources to refer to are the following two links:

- Official Irish guidance regarding Zika:
  http://www.hpsc.ie/a-z/vectorborne/zika/
- List of countries affected by Zika virus:
  http://www.who.int/emergencies/zika-virus/classification-tables/en/

3. Dengue

Pregnancy is not thought to increase incidence or severity of disease, but infection with Dengue virus during pregnancy might predispose women to certain pregnancy complications. Women in late pregnancy should avoid travel to areas of on-going disease and those in earlier pregnancy should consider dengue as a serious hazard.

4. Chikungunya

Mother to child transmission has been reported in women who were infected in later stages of pregnancy and had fever in the days immediately prior to or during labour

Vaccines:

In general non-live vaccines can be administered during pregnancy if the risk is considered to be high for the disease. While in the literature there seems to be no evidence of adverse foetal outcomes when non-live vaccines are administered during pregnancy, one tries to weigh up risk and benefit of exposing the expecting mother and foetus to a vaccine.

Live vaccines, including Yellow fever vaccine should be avoided during pregnancy. In exceptional circumstances, where travel to a high risk area of YF disease is unavoidable, the vaccine can be considered following individual risk assessment.

If live vaccines are given to a woman planning pregnancy, conception should be delayed until 1/12 after receiving live vaccines.

The following table gives some guidance which vaccines can safely be used during pregnancy and breastfeeding, if indicated.

	Pregnancy	Breastfeeding
Safe to use/Recommended	IPV-Tdap (16-32/52) Tdap TdP Td Influenza Hepatitis B	IPV-Tdap (16-32/52) Tdap TdP Td Influenza Hepatitis B Hepatitis A Typhoid inactivated Rabies Pre and Post exposure Cholera Meningitis ACYW Japanese Encephalitis TBE Pneumococcal
Can be given if risk of disease if significant	Hepatitis A Typhoid inactivated Typhoid oral Rabies Pre and Post exposure Cholera Meningitis ACYW Japanese Encephalitis TBE Pneumococcal	Typhoid oral
Avoid giving	YF, BCG, MMR, Varicella	YF

Other Health risks

Food poisoning:
Gastrointestinal infections can be severe for the expecting mother and the unborn child. Certain infections like Hepatitis A, Hepatitis E, Listeriosis or Toxoplasmosis are associated with a higher risk of complications (including f0etal death) than in the non-pregnant traveller.

Therefore strict Food and Water Precautions should be emphasized including avoidance of unpasteurized cheeses and undercooked meats. Water should preferably be boiled than chemically treated; especially purification with Iodine needs to be avoided.

Travel by air

Flying is allowed by most commercial airlines up to 36 weeks of gestation (32 weeks of gestation if multiple pregnancy) if the pregnancy is uncomplicated. Most airlines require a 'fit for travel' note from 28 weeks, but it is best to check requirements and guidance of the individual airlines through their website. When booking the flight, the gestational age at the planned return date must be considered.
While the lower cabin pressure should not affect the foetus, it could cause problems in women with pre-existing conditions like sickle cell disease, severe anaemia or cardiovascular problems.
As the risk of deep vein thrombosis is estimated to be 5-10 times higher in an expecting mother, preventive measures like frequent mobilisation, isometric leg exercises and wearing graduated compression stockings should be stressed.

Cruise ships

Most cruise lines take pregnant travellers up to 28 weeks gestation, some even only up to 24 weeks. Guidance and requirements (e.g. 'fit to travel' not from GP or Obstetrician) need to be checked with the individual cruise line. General health risks on cruise ships like respiratory tract infections, gastrointestinal infections or injuries from falls need to be addressed as well as motion sickness.

Altitude sickness

While travel to moderate altitudes (up to 2500m) for short periods of time is not associated with significant risks, the WHO advises that travel to sleeping altitudes above 3000m is unadvisable during pregnancy. Women with complicated pregnancies (e.g. anaemia, chronic pregnancy induced hypertension) should avoid travel to high altitudes.
Acetazolamide should not be used during pregnancy and a slower ascent be recommended. When travelling to high altitude the remoteness and potential lack of medical services should be taken into consideration.

Scuba diving

Scuba diving is not advisable for the expecting mother due to the risk of foetal gas embolism during decompression.

References:

http://www.travax.nhs.uk/health-advice/special-groups/pregnancy-and-pre-conception/

https://travelhealthpro.org.uk/factsheet/45/pregnancy

https://wwwnc.cdc.gov/travel/yellowbook/2018/advising-travelers-with-specific-needs/pregnant-travelers

https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/

https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/660051/Guidelines_for_malaria_prevention_in_travellers_from_the_UK_2017.pdf

Keystones et al.: Travel Medicine, Third Edition, Chapter 'The Pregnant and Breastfeeding Traveller'

Dr. Astrid Weidenhammer
TMSI meeting 10.02.1018

Dates for the Diary

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 - 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 afternoor tea/coffee and lunch included.For further information, please contact Anne at 045 890 127 or annehredmond@eircom.net