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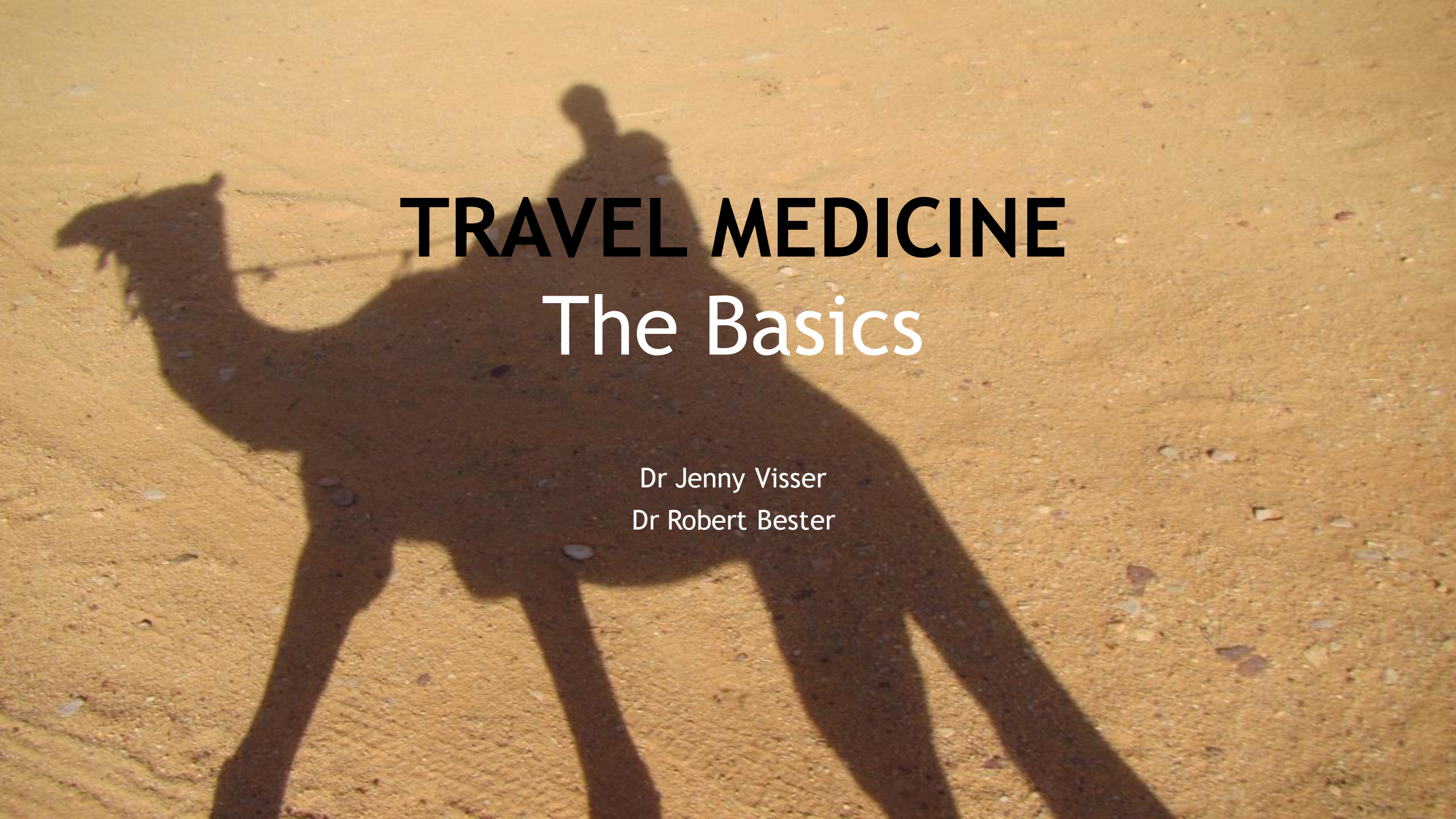
Saturday, June 10, 2017 (Room 5)

14:00 - 14:55 WS #143: Travel Medicine - The Basics

15:05 - 16:00 WS #155: Travel Medicine - The Basics (Repeated)



TRAVEL MEDICINE
The Basics

Dr Jenny Visser
Dr Robert Bester

OUTLINE OF WORKSHOP

- Introduction
- Have a process and resources
- What do you need to know?
  - About the person?
  - About the trip?
- Travel advice
  - Food & Water
  - Insect borne
  - Vaccinations
  - Medical kit
- The more challenging
  - VFRs
- Trying to fit it into a consultation

INTRODUCTION

1. Travel vaccinations should only be provided as part of a **comprehensive pre-travel consultation**
2. Most travel **vaccinations are licensed as drugs**, and can only be prescribed by a registered doctor (Some exceptions)
3. Much of a travel consultation can be done by a doctor, nurse or pharmacist - **a team approach** works well
4. **It is not all about vaccinations** –The perceived need for vaccinations is the draw card, but it is negligent to ignore the non-vaccine issues which account for the greatest morbidity/mortality to travelers

ImmNuZ
The official newsletter of the Immunisation Advisory Centre
ISSUE 87 — FEBRUARY 2016

Safe practice — vaccines are prescription medicines

Registered nurses place their nursing practice at risk each time they administer a vaccine without a prescription or standing order unless the registered nurse is an authorised vaccinator and is administering a specifically stated vaccine or vaccines for the purpose of an approved immunisation programme, for example the National Immunisation Schedule or a local immunisation programme approved by the Medical Officer of Health.

Registered nurses are required to administer medications within legislation, codes and scope of practice; and according to authorised prescription, established policy and guidelines.

- When a registered nurse **IS NOT** an authorised vaccinator
  - Every vaccine dose must be prescribed individually or with a standing order from a registered medical practitioner, nurse practitioner with prescribing rights or registered midwife
- When a registered nurse **IS** an authorised vaccinator
  - An authorised vaccinator can administer the specific vaccines covered by their authority without a prescription or standing order
  - Any other vaccine has to be prescribed individually or with standing order

A patient's doctor may write "Needs hepatitis A and hepatitis B vaccines for travel" in the clinical notes. A registered nurse cannot use this clinical note to administer either a course of Twinrix® or a course of Havrix® and Engerix-B® vaccines, without a prescription. A prescription in the clinical notes needs to include the vaccine name, strength (where appropriate), dose, and frequency of dose administration.

APPROACH TO TRAVEL CONSULT

- Travel is not something you add at the end of an existing consultation!
- Use a questionnaire – either when they tell reception or ask doctor/nurse- to fill in and bring back educates/legitimises a dedicated consultation. Can add references for them to look up on line to reduce what you have to say
- Use a template on computer/paper:
  - Less likely to forget things
  - Different members of team can contribute and tick it off
  - Stops you from getting bogged down!
- Educate staff/patients about the process in newsletters, notice board, practice info

Please complete page 1 & 2 prior to your travel appointment

Personal Details:

Name:.....

Date of Birth:..... Male [ ] Female [ ]

Contact Telephone number:.....

Email.....

Passport Number.....(*Only required if travelling to South America or South Africa*)

Itinerary and purpose of visit

Date of Departure:..... Overall length of trip.....

Country to be visited in order	Length of stay	Away from medical help at destination? If so, how remote?	Urban or Rural?
1			
2			
3			
4			
5			
6			

Please circle the descriptions that best describe your visit:

1	**Type of trip**	Business	Pleasure	Other
2	**Holiday type**	Package Camping	Self-organised Cruise Ship	Backpacking Trekking
3	**Accommodation**	Hotel	Relatives/family home	Other.....
4	**Travelling**	Alone	With family/friend	In a group
5	**Staying in area which is**	Urban	Rural	Altitude
6	**Planned activities**	Safari	Adventure	Other.....

Personal medical history:

a	**Do you have any recent or past medical history of note?** *This includes diabetes, heart or lung conditions etc*
b	**List any current or repeat medications?**
c	**Do you have any allergies, eg: eggs, antibiotics, nuts etc?**
d	**Have you ever had a serious reaction to a vaccine given to you before?**
e	**Does having an injection make you feel faint?**
f	**Do you or any close family members have epilepsy?**
g	**Do you have any history of mental illness, including depression or anxiety?**
h	**Have you recently undergone radiotherapy, chemotherapy or steroid treatment?**
i	**Woman only: Are you pregnant or planning pregnancy or breast feeding?**
j	**Have you taken out travel insurance? If you have a medical condition have you informed your insurance company about this?**
k	**Please give any further information that may be relevant, including and future travel plans?**

Vaccination History:

Have you ever had any of the following vaccinations/malaria tablets, and if so, when?

- ☐ Tetanus/Diptheria
- ☐ Whooping Cough
- ☐ Typhoid
- ☐ Meningitis
- ☐ Rabies
- ☐ Polio
- ☐ Hepatitis A
- ☐ Yellow Fever
- ☐ Japanese Encep
- ☐ Other (Please specify)
- ☐ MMR
- ☐ Hepatitis B
- ☐ Influenza
- ☐ Malaria Tablets

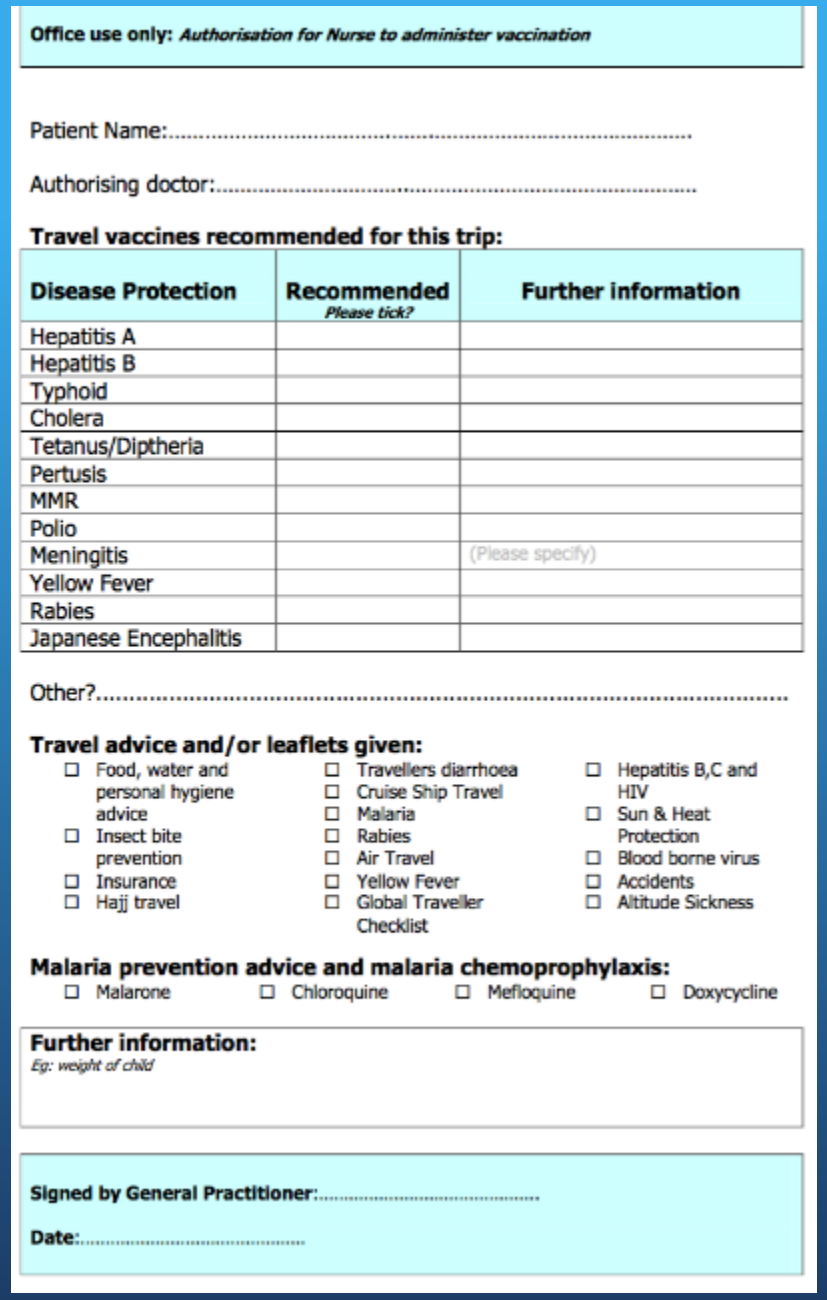
.....

.....

I have received information on the risks and benefits of the vaccines recommended and have had the opportunity to ask questions.

I consent to the vaccines being given.

Signed:..... Date:.....



Office use only: ***Authorisation for Nurse to administer vaccination***

Patient Name:.....

Authorising doctor:.....

Travel vaccines recommended for this trip:

Disease Protection	Recommended *Please tick?*	Further information
Hepatitis A		
Hepatitis B		
Typhoid		
Cholera		
Tetanus/Diptheria		
Pertusis		
MMR		
Polio		
Meningitis		(Please specify)
Yellow Fever		
Rabies		
Japanese Encephalitis		

Other?.....

Travel advice and/or leaflets given:

- ☐ Food, water and personal hygiene advice
- ☐ Insect bite prevention
- ☐ Insurance
- ☐ Hajj travel
- ☐ Travellers diarrhoea
- ☐ Cruise Ship Travel
- ☐ Malaria
- ☐ Rabies
- ☐ Air Travel
- ☐ Yellow Fever
- ☐ Global Traveller Checklist
- ☐ Hepatitis B,C and HIV
- ☐ Sun & Heat Protection
- ☐ Blood borne virus
- ☐ Accidents
- ☐ Altitude Sickness

Malaria prevention advice and malaria chemoprophylaxis:

☐ Malarone ☐ Chloroquine ☐ Mefloquine ☐ Doxycycline

Further information:
Eg: weight of child

Signed by General Practitioner:.....

Date:.....

Example of questionnaire – several practices have theirs on-line

Best to develop your own

RESOURCES FOR YOU/TRAVELLER

RESOURCES FOR YOU/TRAVELLER

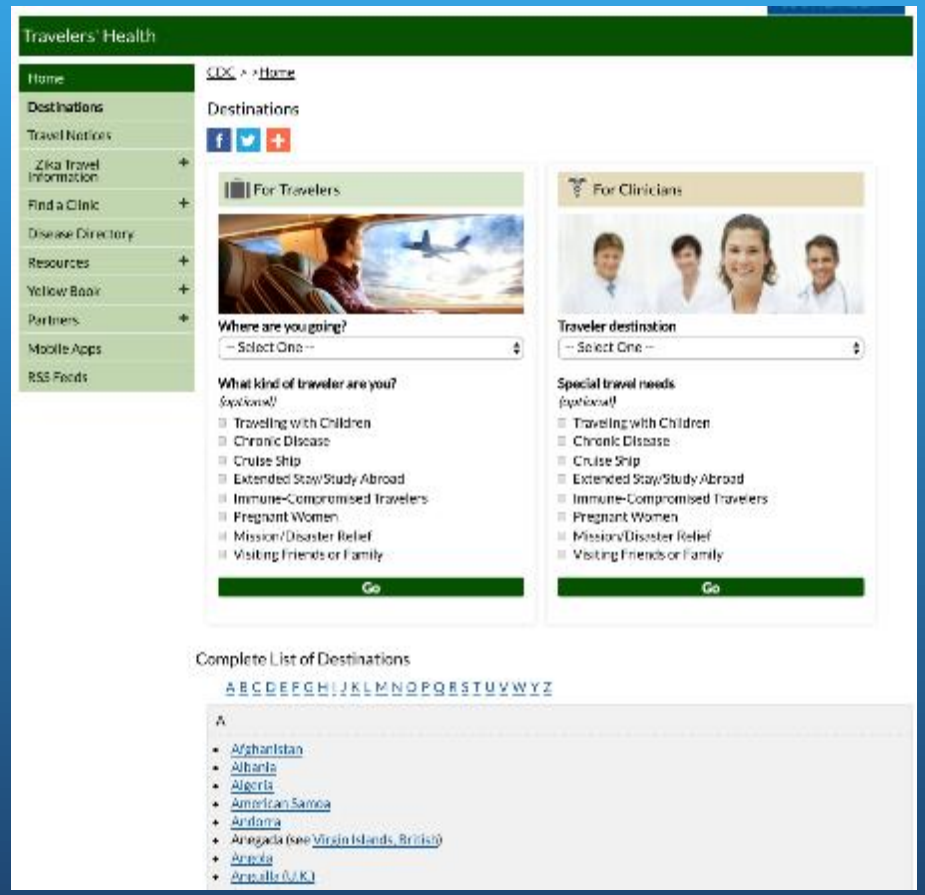
Have a favourite!

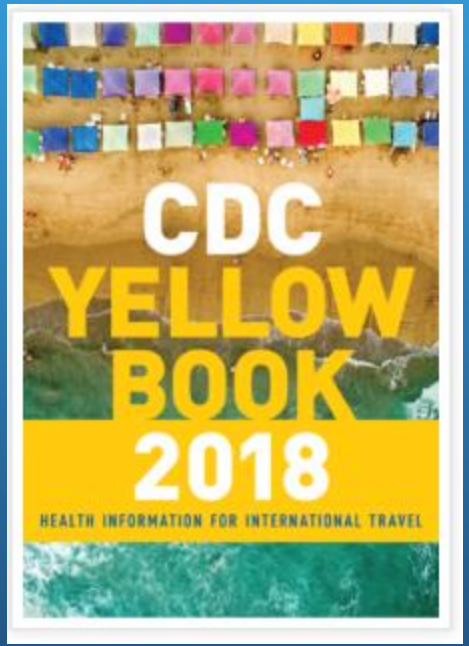
Get to know your way around one really well, and use the others for a second opinion if unsure, e.g.

1. Travelers' Health / CDC –https://wwwnc.cdc.gov/travel/
2. Travel Health Pro –UK - http://travelhealthpro.org.uk/
3. CATMAT (Public Health Canada) - http://www.phac-aspc.gc.ca/tmp-pmv/index-eng.php
4. Fitfortravel (NHS Scotland)

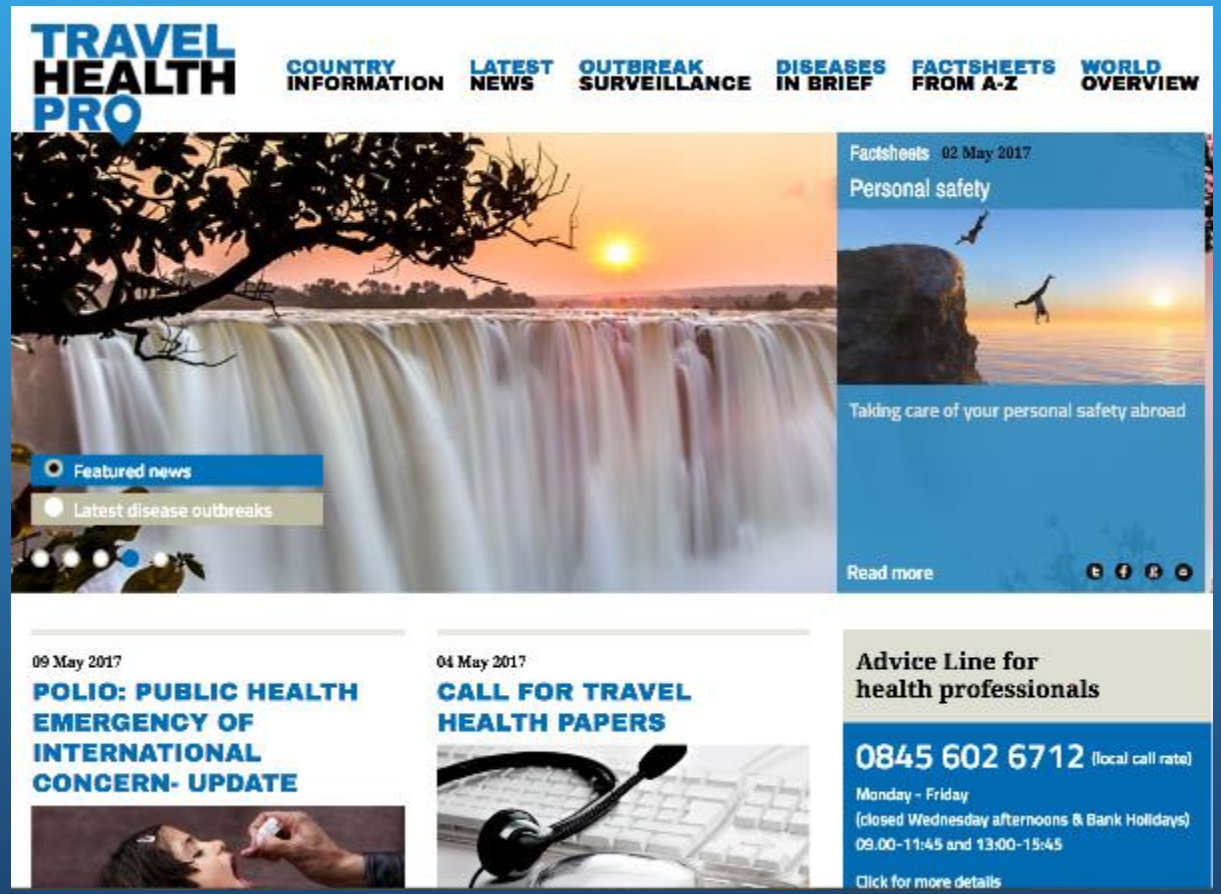
   http://www.fitfortravel.nhs.uk/home.aspx

Travelers' Health / CDC - https://wwwnc.cdc.gov/travel/





Travel Health Pro – UKhttp://Travelhealthpro.org.uk/

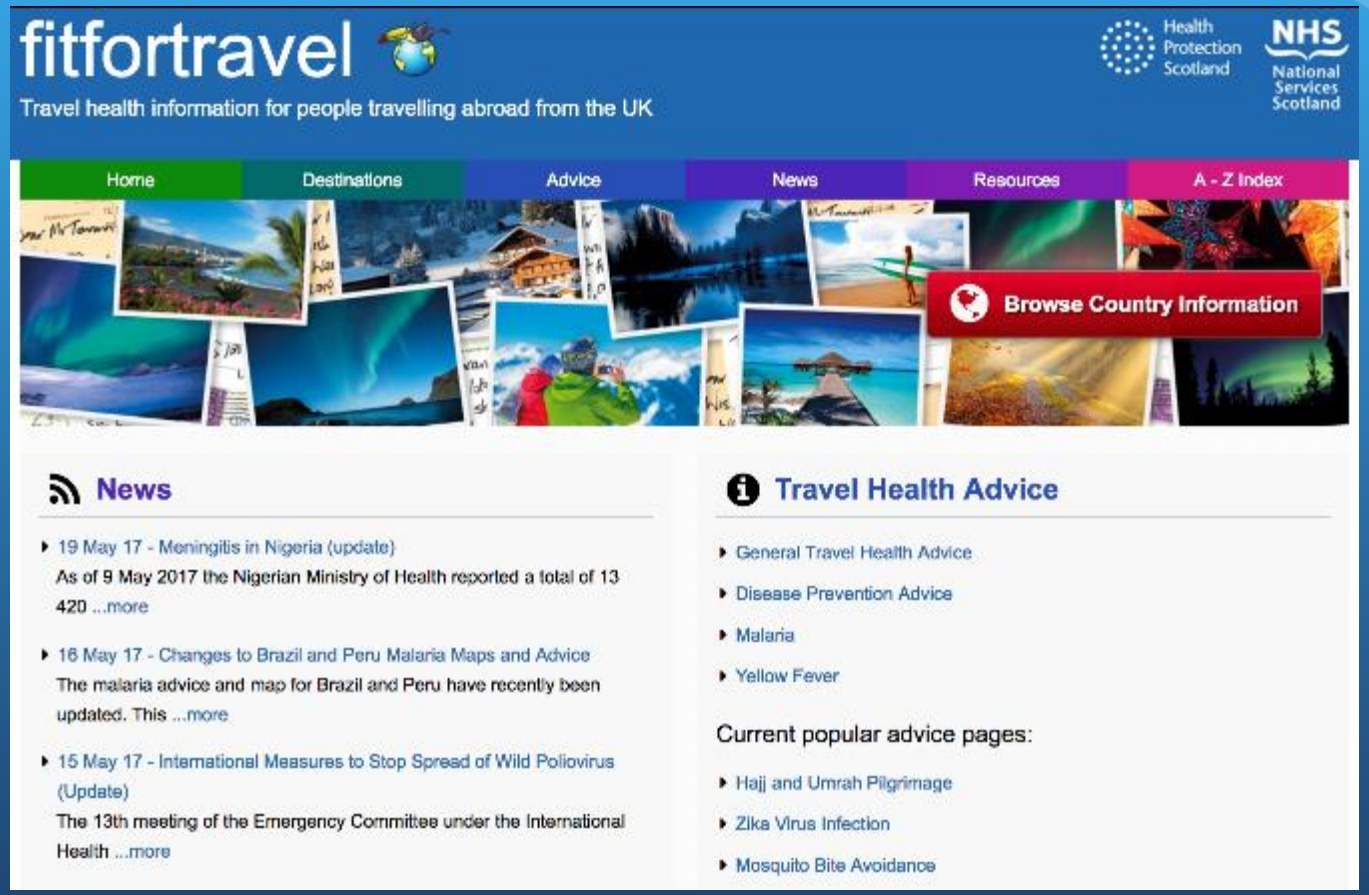


CATMAT (Public Health Canada)

http://www.phac-aspc.gc.ca/tmp-pmv/index-eng.php

Fitfortravel (NHS Scotland)

http://www.fitfortravel.nhs.uk/home.aspx



TRAVELLER- what do we need to know

TRAVELLER MEDICAL HISTORY – what do we need to know

Registered patients – past history, meds, allergies usually known or available on problem list

New patients – questionnaire best option – provides prompts to you and traveller and onus is on them to if not disclosed

- Pregnancy – recent/current/planned
- Cardiorespiratory
- Neurological/psychological
- Surgery/immobilisation previous 6 months
- Allergies
- Medications

TRAVELLER MEDICATION/ALLERGIES – what is relevant?

- Potential interactions – with regular meds
- Medication allergies – Penicillin /Sulpha
- Vaccine ingredients – egg, thiomersal, latex
- Food – peanut, gluten etc ? Epipen/food card

PREVIOUS TRAVEL
What's relevant?

PREVIOUS TRAVEL
What's relevant?

1. Travel to developing countries (acknowledges risk gradient)
2. Familiar with the challenges of travel
3. Health problems with previous travel (diarrhoea, altitude, malaria, DVT)
4. Social/cultural issues and awareness
5. Style of travel (up-market versus roughing it)
6. Confident or anxious traveller ?

-→ helps you know at what level to pitch the discussion

TRAVEL ITINERARY
what's important to know?

1. Departure date – how much time do you have…
2. Purpose of travel – holiday, business, sport, VFR, medical, adventure
3. Flight schedule - VTE risk, jet-lag, recovery time
4. Countries visited and duration (short business vs prolonged VFR)
5. Single/group
6. Escorted tour or independent travel – stratifies risk
7. Accommodation (5 star vs camping/backpacking)
8. Special activities – altitude, diving, trekking, adventure, risk
9. ? Profile – single male, repeated trips same destination

PREVIOUS VACCINATIONS
What's important

PREVIOUS VACCINATIONS
What's important

Missed any childhood vaccinations -Attitude of parents to vaccines may help.

MMR 2 doses

Up to date with current vaccines:

- ADT
- influenza

Previous travel vaccinations:

Records

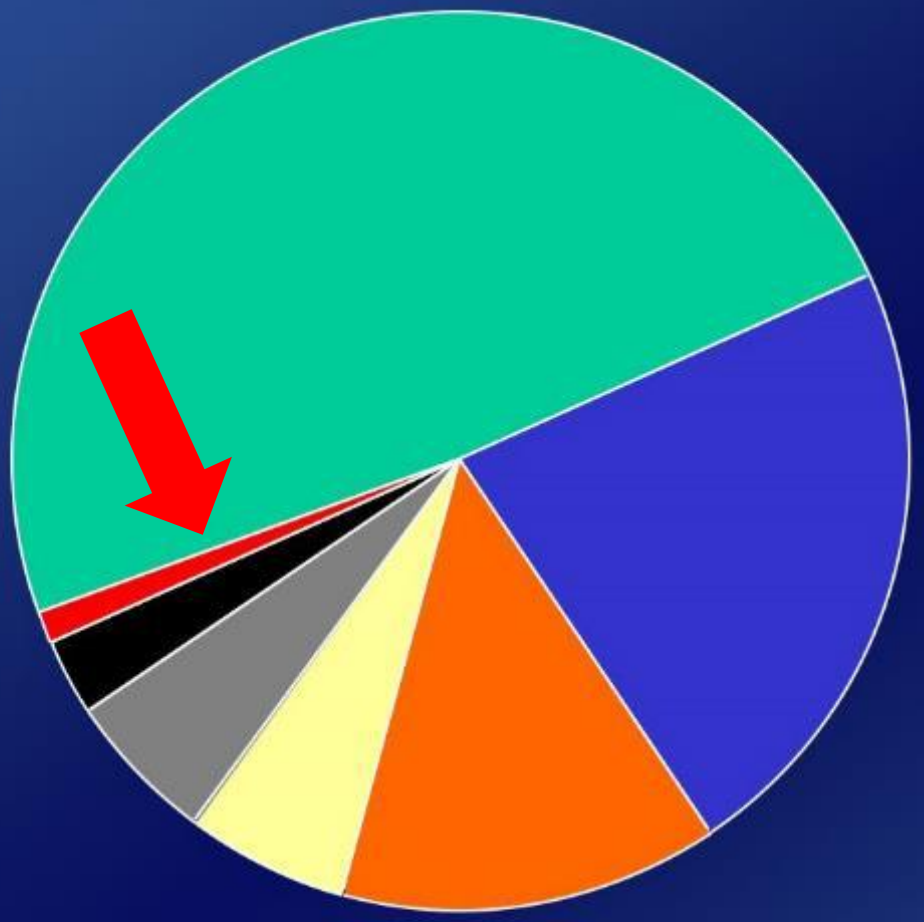
Recollection – vague or certain

? serology

TRAVEL ADVICE
What do we need to cover?

- flight issues
- food/water safety & diarhoea management
- vector-borne illness – insects / animals
- accident/injury
- climate
- women's health
- sexual health
- insurance
- special activities
- special groups (immunocompromised; children; elderly; disabled; VFR etc)

Causes of Mortality in Travelers



- Cardiovascular Disease 49%
- Injury (Unintentional) 22%
- Medical 13.7%
- Cancer 5.9%
- Others/Unknown 5.5%
- Suicide/Homicide 2.9%
- Infectious Disease 1.0%

Ref: Hargarten SW et al. *Ann Emergency Med* 20:622-626, 1991

Estimated Incidence of Illness During Travel in a Developing Country

- Traveler's diarrhea 20%–60%
- Acute respiratory infection 5%–20%
- Malaria (no chemoprophylaxis West Africa) 2%
- Dengue Fever 0.1%
- Hepatitis A 0.03%–0.3%
- Animal bites with rabies risk 0.3%

Incidence varies based on destination, duration of travel, and activities

Information retention……?

‘pre-travel consultations …. perceived to have only little impact because travelers are “flooded” with…. advice, and choosing two or three priority elements with regard to the specific traveler or travel type might have greater efficiency’

Leder K, Bouchaud O, Chen L; Training in Travel Medicine and General Practitioners: A Long-Haul Journey! ; JTM 2015; 22:357-360

Most travellers will remember a maximum of 10 points

- Assess greatest risks
- Keep it simple
- Reinforce with written information / links

Bauer I, Educational Issues and Concerns in Travel Health Advice: Is All the Effort a Waste of Time?; JTM 2005; 12:45-52

Conflicting advice reduces adherence

Ensure up to date, evidence based

Avoid anecdotes

TRAVEL ADVICE

flight issues

TRAVEL ADVICE
flight issues

Is traveller fit to fly?

- Cardiac
- Respiratory
- Musculoskeletal
- Pregnancy
- Psychological / anxiety

Any DVT risk factors?

- Keeping active
- Compression stockings
- Enoxaprin

TRAVEL ADVICE

food/water safety & diarrhoea management

RISK BEHAVIOUR MODIFICATION (low protection)

- Personal hygiene
- Food and water precautions

CHEMOPROPHYLAXIS (rarely used)

- Bismuth subsalicylate (not available in NZ)
- Non-absorbable antimicrobials – Rifaximin (not available in NZ)
- Absorbable antimicrobials – Quinolones e.g. Ciprofloxacin – avoid!

PRO and PRE-BIOTICS (limited benefit – Cochrane review)

IMMUNIZATION (does not cover most diarrhoeal illness)

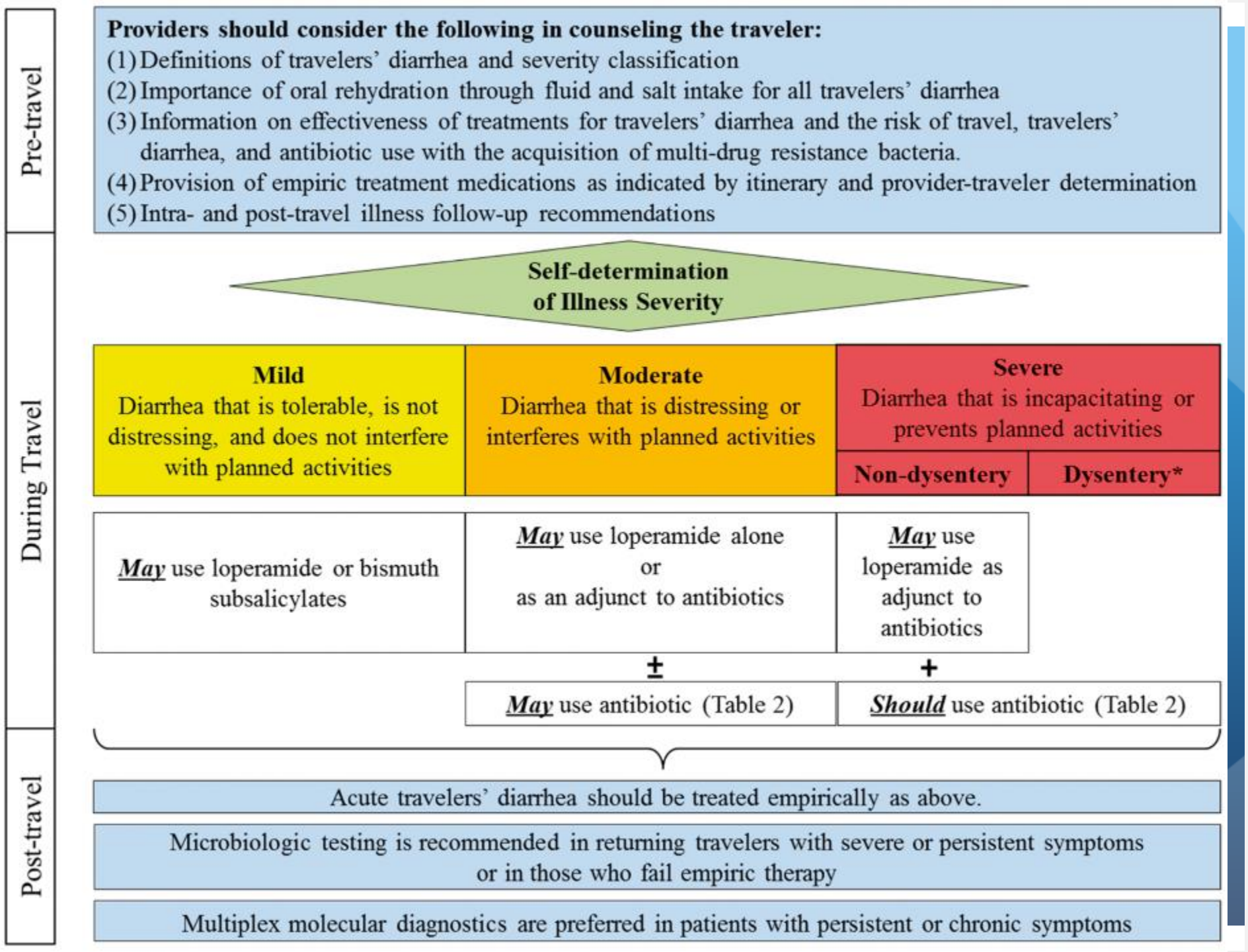
- Polio
- Hep A
- Typhoid
- Cholera/ETEC
- Rotavirus

TRAVEL ADVICE

food/water safety & diarrhoea management

- Most diarrhoea ….:
- is self-limiting
- Lasts 2-3 days
- Can be managed symptomatically with:
  - Rehydration salts
  - Loperamide
  - Hyoscine

Does not require antibiotics


Pre-travel
During Travel
Post-travel
Providers should consider the following in counseling the traveler:
(1) Definitions of travelers' diarrhea and severity classification
(2) Importance of oral rehydration through fluid and salt intake for all travelers' diarrhea
(3) Information on effectiveness of treatments for travelers' diarrhea and the risk of travel, travelers' diarrhea, and antibiotic use with the acquisition of multi-drug resistance bacteria.
(4) Provision of empiric treatment medications as indicated by itinerary and provider-traveler determination
(5) Intra- and post-travel illness follow-up recommendations
Self-determination of Illness Severity
Mild
Diarrhea that is tolerable, is not distressing, and does not interfere with planned activities
Moderate
Diarrhea that is distressing or interferes with planned activities
Severe
Diarrhea that is incapacitating or prevents planned activities
Non-dysentery
Dysentery*
May use loperamide or bismuth subsalicylates
May use loperamide alone or as an adjunct to antibiotics
May use loperamide as adjunct to antibiotics
±
+
May use antibiotic (Table 2)
Should use antibiotic (Table 2)
Acute travelers' diarrhea should be treated empirically as above.
Microbiologic testing is recommended in returning travelers with severe or persistent symptoms or in those who fail empiric therapy
Multiplex molecular diagnostics are preferred in patients with persistent or chronic symptoms

TRAVEL ADVICE

food/water safety & diarrhoea management

Antibiotics - reserve for mod/severe high impact/dysentery

- more rapid resolution
- ? lower risk chronic diarrhoea / IBS
- increased risk MDR organisms
- No longer have a "single agent"
- Campylobacter resistance to Quinolones

- **Antibiotic + Loperamide**
  - Azithromycin 1000mg stat, or 500mg daily 3 days (Asia)
  - Ciprofloxacin 1000mg single dose,
    - then if needed 500mg BD 3 days or rpt stat dose 3 times
  - ? Ornidazole if persistent

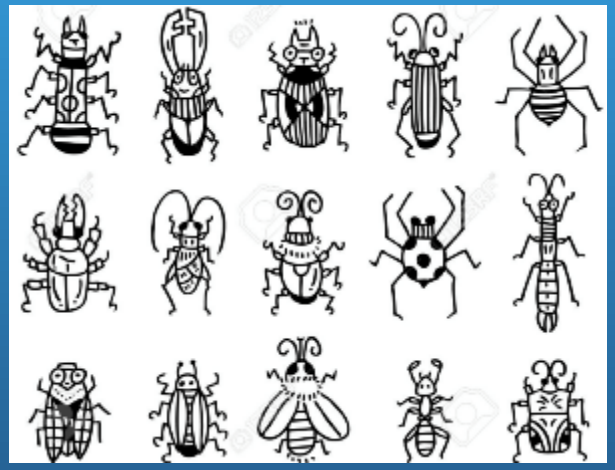
TRAVEL ADVICE

vector-borne illness – insects

TRAVEL ADVICE

vector-borne illness – insects

- **Avoiding insect habitat** (outdoors night/dawn/dusk)
- **Physical barriers**
  - Clothing (permethrin impregnated)
  - Bed nets(permethrin impregnated)
  - Door / window screens / aircon
- **Insect repellents**
  - Chemical
    - DEET 10-35%
    - Picaridin/Icaridin 5-20%
    - IR3535
  - Botanical (short duration, lower efficacy)
    - Lemon Eucalyptus oil (PMD)
    - Citronella oil
    - Soybean oil
    - Geranium oil




Shanahan
"We're pretty sure it's the West Nile Virus."

TRAVEL ADVICE

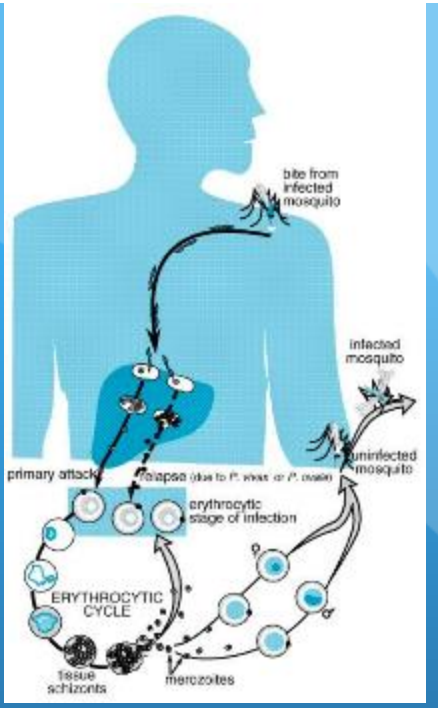
vector-borne illness – insects

- Many mosquito borne illnesses are not vaccine or drug preventable
  - Dengue
  - Chikungunya
  - Zika
  - WNV
  - RRV
  - etc

➢ **BITE PREVENTION!**

TRAVEL ADVICE

vector-borne illness – insects



MALARIA

Risk depends on itinerary, duration/type of travel, season, activities

- Risk areas – CDC / HealthPro / WHO etc – have favourite
- Medication - CDC / HealthPro / WHO / NZF – know drugs

1. Bite prevention first step. Anopheles – dusk to dawn
2. No antimalarial is 100% effective
3. High risk groups – pregnancy, children, asplenic, immunosuppressed, VFR
4. Chemoprophylaxis
   - Chloroquine
   - Mefloquine
   - Doxycycline
   - Atovaquone/proguanil

TRAVEL ADVICE

vector-borne illness – insects

MALARIA

Chloroquine – (now rarely used)

Weekly from 1-2 weeks before, weekly while in risk area and for 4 weeks after leaving area.

Americas – limited areas

Safe in pregnancy

May flare psoriasis

TRAVEL ADVICE

vector-borne illness – insects

MALARIA

Mefloquine

– Weekly from 3 weeks before (or loading dose week before but rarely used due increased to side-effects), weekly while in risk area and for 4 weeks after leaving area.

Not recommended – history seizures, psychiatric events, conduction disorders

Safe pregnancy (all trimesters)

Drug resistance Asia

TRAVEL ADVICE

vector-borne illness – insects

MALARIA

Doxycycline

Daily starting 1-2 days before risk area, daily while there, and for 4 weeks after

Inexpensive

Last-minute traveller

Side-effects – photosensitivity, GI intolerance, candidiasis

c/i – preg and children

TRAVEL ADVICE

vector-borne illness – insects

MALARIA

Atovaquone/proguanil = Malarone®

Daily from one day before risk area, daily while there, for 7 days after leaving

Side-effects – theoretically least

Good for short high risk trips

Good last-minute option

Most expensive

c/I - renal impairment, children < 5kg

Pregnancy – not licensed but no evidence of harm and used by some experienced practitioners after informed consent

TRAVEL ADVICE

vector-borne illness – insects

TICKS / FLIES / LEECHES / ETC = awareness

- Ticks- Lyme dis, spotted fevers, typhus, babesiosis, etc
- Flies - leishmaniasis, trypanosomiasis, loiasis, myasis, etc
- Chigger mites - scrub typhus, Rickettsial pox
- Fleas - plague, murine typhus
- Lice - epidemic typhus, relapsing fever
- Kissing bugs - Chaga's disease

etc

TRAVEL ADVICE

vector-borne illness – animals = RABIES

TRAVEL ADVICE

vector-borne illness – animals = RABIES

Animal saliva/neural tissue

Dogs > Cats > Monkeys > Other

- **Risk awareness**
- **Animal avoidance**
- **Know what to do**
- **….and do it!**

TRAVEL ADVICE

accident/injury

Accidents

- driving
- cycling
- motorbikes
- pedestrians

Water (+ alcohol)

- Boating/kayaking
- Drowning
- diving into shallow water

Crime / homicide

Travel advisories e.g. www.safetravel.govt.nz

TRAVEL ADVICE

Climate / environment

Altitude

- flying in or overland
- past experience
- rate of ascent / rest days
- ? Acetazolamide prophylaxis
- COPD, thalassaemia

Sun

Hot / cold /humid environments

Air pollution

Water sea / fresh

TRAVEL ADVICE
Sexual health

- anonymity of travel
- desire for unique experiences
- Reduced social and sexual inhibitions

- 5-51% travellers have a casual sexual experience during travel*
- 33-50% do not consistently use a condom*

  **Vivancos et al. Foreign travel, casual sex, and sexually transmitted infections: systematic review and meta-analysis. International JID. 2010;14(10):e842-e51.*

- "The most serious limitation of condoms is their inability to spontaneously migrate from pocket to penis"

  - Vulnerable – esp young, female, single, SSA, alcohol, drugs

TRAVEL ADVICE

Insurance

If you can't afford insurance – you can't afford to travel!

Difficult - Elderly, pre-existing conditions, special activities

- Remind of importance of insurance
- Declare pre-existing conditions
- Check exclusions
- Ensure it covers all intended activities

TRAVEL ADVICE Insurance

- https://www.safetravel.govt.nz/news/consumer-nz-travel-insurance-guide
- http://www.canstar.co.nz/travel-insurance/

TRAVEL ADVICE

special groups – refer if not skilled

Women managing/skipping periods, contraception, sexual safety

Pregnant / breast feeding: preg complications, no live vaccines, incr risks infections incl malaria

Infants and young children: infection, injury, immunization, etc

Older traveller: CV disease, fitness/conditioning, slower acclimatization, insurance

Disabled: insurance, repairs for special equipment, transport, etc

Medical/psychiatric problems: insurance, summary letter, limitations

Immunocompromised: - incr risk infection, no live vaccines, poor polysaccharide vaccine response, etc

Business/executive travellers: cumulative risks, Rx kits, fatigue, etc

Longterm / expats / aid workers: malaria, psychological & cultural issues, safety

Mass gatherings: Hajj, Olympics, Rugby World Cup, etc

Medical tourism: MDR infections, Hep B/C, HIV, complications

TRAVEL ADVICE

"VFR" a Primary Health Care Problem

- 'a VFR traveller is a traveller whose primary purpose is to visit friends and relatives, and where there is a gradient of epidemiological risk between home and destination'.
- VFR travellers may be immigrants, asylum seekers, refugees, students or displaced persons.
- Many are dealt with like usual travellers with a travel consult, advice, vaccinations, medical kits etc
- Some do not perceive themselves as being at risk, cannot afford a consult, and we rarely see them.

➢ Look out for your registered patients who were born overseas, whose parents were born overseas, and might go back, take their children back, or go home in a crisis

➢ Be pro-actice - ask about future VFR travel at times of routine visit, children's vaccinations, flu vaccinations, etc. Prioritising becomes important if budget/time constraints

TRAVEL VACCINATIONS
Routine / Recommended / Required

TRAVEL VACCINATIONS
Routine / Recommended / Required

- **ROUTINE** – National Immunization schedule – check up to date with ADT, flu, and had 2 MMR

- **RECOMMENDED** – prior to travel depending on destination, risk, activities e.g. hepatitis A/B, rabies, japanese encephalitis, etc

- **REQUIRED** – mandated by International Health Regulations / Govts for entry into specific countries e.g. yellow fever, meningococcal disease

ROUTINE NZ VACCINATIONS

	Rotavirus (RV1)	Diphtheria, tetanus, acellular pertussis, polio, hepatitis B, *Haemophilus influenzae* type b (DTaP-IPV-HBV/Hib)	Pneumococcal conjugate vaccine (PCV10)	*Haemophilus influenzae* type b (Hib)	Varicella vaccine (VV)	Measles, mumps, rubella (MMR)	Diphtheria, tetanus, pertussis, polio (DTaP-IPV)	Tetanus, diphtheria, acellular pertussis (Tdap)	Human papillomavirus (HPV)	Tetanus, diphtheria (Td)	Influenza
Every pregnancy								Boostrix (Between 28–38 weeks of pregnancy)			Influvac (Any time during pregnancy)
6 weeks	Rotarix	Infanrix-hexa	Synflorix								
3 months	Rotarix	Infanrix-hexa	Synflorix								
5 months		Infanrix-hexa	Synflorix								
15 months			Synflorix	Hiberix	Varilrix	Priorix					
4 years						Priorix	Infanrix-IPV				
11 years								Boostrix			
12 years									Gardasil 9 Two doses		
45 years										ADT Booster	
65 years										ADT Booster	Influvac

Table 1. The New Zealand National Immunisation Schedule (from 1 July 2017)

TRAVEL VACCINATIONS

Routine

1. **MMR** – 2 doses for longterm cover

   Can be given as early as 6-9 months – off schedule, needs doctor authorisation and parental consent

   Need 2 further doses if first doses under 12 months

2. **ADT** – consider 10 yrly for travel

3. **INFLUENZA** – recommend for all travellers

   Fluquadri covers 4 strains

   Consider for those going into Winter during travel

4. **PERTUSSIS** – consider DTaP

5. **OTHER** – Varicellla, Pneumococcal, Herpes zoster

TRAVEL VACCINATIONS
Recommended for travel

- depending on destination, risk (perceived/accepted), cost

Hepatitis A	Hepatitis B
Typhoid	Cholera/ETEC
Rabies	Meningococcal
Japanese encephalitis	Polio
Tick borne encephalitis	

- All need a risk assessment, scheduling, prescribing, informed consent and documenting (+ recall)

TRAVEL VACCINATIONS
Recommended for travel

HEPATITIS A, B and TYPHOID

Havrix Jnr ® licensed down to age 1yr, Avaxim 2 yrs

Vivaxim ® licensed > 16 yrs, off license < 16 (+ consent)

(Hepatyrix ® licensed ≥ 16 yrs, not currently available)

Twinrix ® (A+B) – *Twin* means 2 vaccines, not 2 doses!

needs 3 doses, not ideal for imminent travel

Hep A can be given up to day of travel

Typhoid – approx 70% effective, ideally 2 weeks, S Asia

Hep B – Std schedule 0, 1month, 6 months

Rapid schedule – Engerix B licensed, 0, 7, 30, 365

<29 yrs likely had, 30-45 might have had it

serology not routinely, results challenging due to immune memory. If neg, boost and retest > 4 weeks

TRAVEL VACCINATIONS
Recommended for travel

- **RABIES** Merieux Inactivated Rabies Vaccine (MIRV) ® only current brand (previous vaccine= Verorab ®)

High risk destinations – Indian Subcontinent > Asia > Africa > S Am

Expensive, but lifelong for most tourist travellers, simplifies Rx after exposure

Pre-exposure prophylaxis (PrEP)

IM/ID days 0, 7, 21 or 28

(ID off license in NZ)

(Timing – stick to licensed schedules)

Post – exposure prophylaxis (PEP) - wound care +

had PrEP – 2 doses days 0 and 3

no PrEP – Ig + 5 doses days 0, 3, 5, 14, 28

TRAVEL VACCINATIONS
Recommended for travel

MENINGITIS

Person/person droplet spread

5-10% die even with early dx/rx

10-20% significant morbidity in survivors

Travellers to remote areas low chance survival

Not just travellers – think students age

Compulsory for Hajj/Umra. Meningitis belt Africa June - Dec

- Menactra®/Nimenrix® = conjugate vaccines for ACY&W-135, 5 yrs, removes nasal carriage
- Menomune®/Mencevax ®= polysaccharide ACWY, 3 yrs, nasal carriage persists. No longer available in NZ.

TRAVEL VACCINATIONS
Recommended for travel

JAPANESE ENCEPHALITIS

Culex mosquito = Dusk-dawn feeder

Asia temperate – summer

subtropical – monsoon/wet season

tropical – year round

Consider for significant destination/duration/activity risks

NZ Vaccine = Jespect ® 2 doses 1 month apart = expensive

TRAVEL VACCINATIONS
Recommended for travel

CHOLERA/ETEC (Dukoral ®)

Consider for :

- high risk e.g. aid workers working refugee/disaster areas
- Incr risk TD/complications e.g. elderly, immunosuppressed, chronic illness esp GI, or wanting to minimise risk TD

2 oral doses 1 week apart

No concomitant antibiotics

TRAVEL VACCINATIONS

Required

REQUIRED – mandated by International Health Regulations / Govts for entry into specific countries e.g. yellow fever, meningococcal disease, polio

Yellow Fever – MoH approved clinics

live virus (same day or 4 weeks apart from MMR/Varicella/BCG)

Contraindicated if immunosuppressed

https://wwwnc.cdc.gov/travel/yellowbook/2016/infectious-diseases-related-to-travel/yellow-fever-malaria-information-by-country

TRAVEL VACCINATIONS

Scheduling vaccines

TRAVEL VACCINATIONS

Scheduling vaccines

- Max 1ml/deltoid
- If more than 2 doses per muscle, space by 2cm
- Live virus vaccines must be together or spaced by 4 weeks
- Don't start rabies or Twinrix® if cannot complete schedule before travel

	Day 0	Day 7	Day 21	Day 28/30	2 mth	6 mth	12 mth
Hep A	1						1
Hep A/B	1			1		1	
	1	1	1				1
	1			1	1		1
Rabies	1	1		1			
	1	1	1				
Jespect	1			1			
	1	1					?

TRAVEL VACCINATIONS

Last minute traveller

1. Increased overall cost as extra doses required
2. Increased risk side-effects
3. Perception by traveller he/she is protected and fails to get booster – ensure recall or on-referral and document in booklet
4. Uncertainty about anamnestic/memory response compared to standard courses
5. Off schedule for some – informed consent

Rabies days 0, 7, 21

JE days 0, 7 and ? 1 yr

HBVax® 0, 1 and 2 months

Engerix® 0, 7, 21 days and 12 months, OR 0, 1, 2 and 12 months

Twinrix® 0, 7, 21 days and 12 months (consider full dose Hep A instead)

MEDICAL KIT
What's most often used ?

- Anti-malarial meds
- Regular medications – enough, doctor's letter
- GI Diarhoea – Loperamide, Electrolyte, ? Ab,
  Laxative, antacid
- Respiratory – antihistamine, decongestant, ? Ab
- First aid kit incl Analgesics – paracetamol/ibuprofen, dressings
- Sunscreen
- Insect repellent
- Water purifying tabs
- contraception

IN 15 MINUTES – REALLY ?

IN 15 MINUTES – REALLY ?

As an add-on to their usual meds…"by the way, I'm off to Bali, do I need any shots" – Come back! Sometimes have to compromise if leaving imminently, but use it as an opportunity to educate them for next time as most travellers travel again.

Pre-travel questionnaire does save time

Agreement b/t doctors/nurses how to share the work

Give them material/websites to read – avoids information overload, saves time, makes them responsible (you never told me….)

THANK YOU ! QUESTIONS ?