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Saturday, June 9, 2018  
16:30 - 17:25  WS #169: Delivering Travel Medicine in General Practice  
17:35 - 18:30  WS #181: Delivering Travel Medicine in General Practice  
(Repeated)
DELIVERING TRAVEL MEDICINE IN GENERAL PRACTICE

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No conflict of interest
TOPICS

1. Why the need for a ‘travel consult’
2. Positives and negatives of GP versus travel clinics
3. Who’s travelling
4. What can go wrong
5. How to achieve a good travel consult
6. Process of a travel consult - breaking it down

This is an overview of the process, not the specifics
WHY THE NEED?

• Main purpose of a travel consult is risk reduction, a goal shared by both traveller and travel health provider.

• Travel medicine has emerged as a distinct identity in the last 2 decades in response to a substantial increase in international travel.

• How this is achieved is complex, and travel and travel health provider have very different expectations.

ASSESSING RISK

Assessing risk involves:

• clinician’s knowledge - disease, epidemiology, geography, behaviour

• traveller’s risk perception, intention to take risks, level of risk accepted

• having an informed discussion
Positives of Delivering Travel Medicine in GP

- Established trust and relationship with patients
- Known:
  - Vaccine history
  - Chronic illness history & medications
  - Know allergies and drug interactions
- VFR – GP is the best place to identify these travellers
Positives of Delivering Travel Medicine in GP

- Pleasant interlude to chronic illness
- Usually healthy, excited travellers
- We get to travel by proxy (great ideas!)
- It’s not difficult and it’s fun
- It involves teamwork
- Develop a special interest
Positives of Delivering Travel Medicine in GP

‘Travel health specialists are generally not the best practitioners to manage the care of underlying medical conditions presenting risks during travel.

However, GP’s offer continuity and disease management expertise to improve the specificity of pre-travel planning. Thus, ongoing collaboration between the traveller, GP and travel health specialist is likely to yield the best outcomes’.

Negatives of Delivering Travel Medicine in GP

- And while I’m here.....Expectation it’s quick
- Expectation it’s only about vaccines
- Costs of extended consult
- Need for education, updates, resources
- Requires skills for complex itineraries, high risk destinations & activities, & complex health problems
Who’s travelling?
Who’s Travelling?

- In 2014 - new record total of 1135 million travellers
- arrivals increasing in emerging economy destinations.
- The number of travellers is expected to reach 1.8 billion international tourists by the year 2030.
- More New Zealanders are travelling, and many to at risk destinations.

New Zealand Resident Departures

Trips abroad by New Zealanders (yr ending Feb 2018)

2,871,000 trips - 8% growth
122,000 to China - 18% growth

70 % of NZ departures are to at risk destinations
50% to Asia

(3)  http://www.mbie.govt.nz/
New Zealand Resident Departures

Purpose of travel: Business 10%
    Holiday 45-60%
    VFR 25-35%
Not all travel goes to plan......
What can go wrong
Health Risks for the Traveller

- 20%-64% of international travellers will develop some health problem while abroad.
- Travelling overseas carries health risks that do not exist in industrialized countries.


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.
Diseases in Travellers

Geosentinel Survey published in 2013 of 42,000 ill returned travellers, showed that common travel-related illnesses were:

- Gastrointestinal
- Febrile
- Dermatologic diseases

Diseases in Travellers

French Geosentinel study, 12 yr, 3,460 travellers
Tourism 46%
VFR 26% esp. SSA (Sub Saharan Africa)

Common Syndromes:
- febrile illness: 39% (23% malaria)
- dermatological: 21%
- gastro-intestinal: 10%
- respiratory/ENT: 10%

<table>
<thead>
<tr>
<th>Condition</th>
<th>Risk per 100,000 travellers (per month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT, LT/ST, mixed-ETEC, “usual” high risk TD incidence (30% per 2 wks)</td>
<td>10%</td>
</tr>
<tr>
<td>Influenza A or B</td>
<td>1%</td>
</tr>
<tr>
<td>Animal bite with rabies risk</td>
<td>0.1%</td>
</tr>
<tr>
<td>PPD conversion</td>
<td></td>
</tr>
<tr>
<td>Typhoid (South Asia)</td>
<td>3,000</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>8,000</td>
</tr>
<tr>
<td>Tick borne encephalitis (exposed in rural Austria)</td>
<td>10,000</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>8,000</td>
</tr>
<tr>
<td>Typhoid (most other destinations)</td>
<td>500,000</td>
</tr>
<tr>
<td>Japanese encephalitis</td>
<td>1 million</td>
</tr>
<tr>
<td>Meningococcal disease</td>
<td>&gt;1 million</td>
</tr>
<tr>
<td>Rabies</td>
<td></td>
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<tr>
<td>Poliomyelitis</td>
<td></td>
</tr>
</tbody>
</table>

Mortality in Travellers Abroad

- Infectious diseases not the leading causes of death in travellers.

- In USA study of death abroad,
  - 1% due to infectious disease
  - 49% due to CVS diseases and
  - 25% due to trauma were

- Australian and Thai studies leading causes of death in travellers.
  - CVS diseases
  - malignancies


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%
# Mortality in Travellers Abroad

“....vaccines, antimalarial drugs, and diarrhoea management....played a limited role in preserving life or preventing death....”

*MacPherson et al, J Travel Med 2007; 14: 77–84*

<table>
<thead>
<tr>
<th></th>
<th>Canadians&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Scots&lt;sup&gt;2&lt;/sup&gt;</th>
<th>USA&lt;sup&gt;3&lt;/sup&gt;</th>
<th>French&lt;sup&gt;4&lt;/sup&gt;</th>
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</thead>
<tbody>
<tr>
<td>Natural causes</td>
<td>73%</td>
<td>77%</td>
<td>49%</td>
<td>49.1%</td>
</tr>
<tr>
<td>Accidents</td>
<td>18.7%</td>
<td>20.4%</td>
<td>25%</td>
<td>46.4%</td>
</tr>
<tr>
<td>Murder</td>
<td>4.4%</td>
<td>3.2%</td>
<td>2.89%</td>
<td>46.4%</td>
</tr>
<tr>
<td>Suicide</td>
<td>3.7%</td>
<td>1.5%</td>
<td>1%</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Infectious diseases</strong></td>
<td>&lt;1%</td>
<td>1.5%</td>
<td>1%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

(1) MacPerson et al, J Travel Med 2007; 14: 77–84  
(2) Redman et al, J Travel Med 2011; 18: 96–101  
(4) Keystone, J, Travel Medicine, 3rd Ed, 2013
Patient Concerns - Study

Patient Concerns – our experience

1. Vaccination
2. Risk malaria
3. Insect bites (reactions, Zika)
4. Diarrhoea (risk/mx)
5. Wanting a medical kit
6. Specific health issue or risk
   • Managing diabetes, VTE
   • altitude
How: The Process

• The technical knowledge is important but so is **HOW the messages are delivered**\(^9\)
• At least 50% is forgotten after the consult.
• Research recommends **limit to 3 key messages**\(^5,9\)
• Reinforce with good printed or on-line materials\(^5\)

➢ **Provide concise, customized, key information to maximise recall**\(^6\)
• Be consistent (different family or group members may see different people in the practice)
How?

- A successful pre-travel consultation involves risk analysis and counselling to make the patient aware of travel risks.

- Advice must be specifically tailored to the individual, as each traveller has a different underlying medical status.

- Advice should educate the traveller about the risks, without causing undue anxiety.

- Consider “fear of the needle” – some are better educated after vaccination.
How? : 2 common models of care

Model 1: Doctor led
- Doctor reviews demographic, itinerary
- Provides health advice
- Facilitates decision about vaccinations / anti-malarials / medical kit
- Nurse reviews vaccine adverse effects, consent, vaccinates
How? : 2 common models of care

Model 2: Nurse led
- Nurse delivers all pre-travel care using detailed protocols and standing orders for vaccinations / anti-malarials / medical kit, generates scripts, signed by supervising doctor.
- Clear line of contact and regular review with doctor with in-depth knowledge of travel medicine by both parties

Find a model that works for you
The key to success is to manage expectations for:

- Travel Health Provider (you)
- Traveller
- The Practice
How - setting yourself up for success

1. Ensure adequate knowledge
2. Advertise travel service and expertise
3. Allocate enough time
4. Use travel consult templates
5. Use check list of topics to cover
6. Have resources for health provider and traveller
7. Offer medical kits or prescriptions
8. Know your limits and who to refer to for specialist advice
1. Ensure adequate knowledge, experience, continuing education

• Papers, certificate, diplomas in travel medicine
  • University of Otago, Wellington
  • James Cook University, Townsville
  • London, Liverpool, Glasgow, etc

• Seminars / courses
  • Pharmac courses
  • Conferences – NZ Society of Travel Medicine 11/12th Aug

• E-learning e.g. CDC
2. Advertise your system

• Ensure whole practice team is on the same page:
  – doctors
  – nurses
  – admin/reception

• Advertise your policy:
  – practice website
  – noticeboard
  – newsletters
3. Time

- It’s all about having time and a system!
- Allow for a longer consult - usually 30 minutes
- Be willing to tell people to come back
- Spread time over GP and nurse consults
- Use a template and stick to it
  - Electronic or paper
4. Template

• Many templates available on-line
• Remember copyright!
• Develop your own
• It must help you assess individual risk
• Contain consent - signed or documented verbal
• Contain prescriber’s signature for vaccines
  • most travel vaccines still require a doctor’s prescription
  • Can use practice standing orders
International Travel Questionnaire

The answers you supply in this questionnaire will enable us to give the most accurate medical information and advice for your specific travel plans. Please fill this out completely prior to your travel appointment. The more details you can provide regarding your itinerary, the better we can prepare you for a safe and healthy travel experience. Please bring with you, or verify, that we have a copy of your immunization records.

Name: ___________________________ DOB: ___________________________ Student ID#: ___________________________
Phone #: ___________________________ Country of Birth: ___________________________ Email Address: ___________________________

Main Country of Stay: ___________________________ Departure Date: ___________________________ Return Date: ___________________________

1. What is the purpose of your travel? (Study abroad, vacation, volunteer, medical mission, etc.)
2. Please list all the countries, in order of travel, that you will be visiting, or consider visiting:
   1. Country: __________ Region/Cities: __________ Travel Date/Duration: __________
   2. Country: __________ Region/Cities: __________ Travel Date/Duration: __________
   3. Country: __________ Region/Cities: __________ Travel Date/Duration: __________
   4. Country: __________ Region/Cities: __________ Travel Date/Duration: __________
   5. Country: __________ Region/Cities: __________ Travel Date/Duration: __________

*For travels to multiple destinations, attach a separate sheet of paper. If you have a specific itinerary with travel dates, please bring it to your appointment.*

3. What is your living situation going to be? (Home stay, dorm, hostel/hotel, camping, etc.)
4. Please list all planned and possible activities (backpacking, hiking, high altitudes, scuba diving, etc.)

5. Travel Style:  [ ] Independent  [ ] Package Tour  [ ] Adventure trip

6. Are you visiting friends and relatives?  [ ] No  [ ] Yes

7. Do you have any health concerns regarding your travel?

8. Have you had any medical or psychiatric problems?  [ ] No  [ ] Yes, please explain: ___________________________

9. Is there any chance you could be pregnant?  [ ] No  [ ] Yes  [ ] N/A

10. Do you smoke?  [ ] No  [ ] Yes

11. Do you have any allergies to medications, food, etc.?  [ ] No  [ ] Yes, please list: ___________________________

12. What regular medications are you taking?

13. List any previous travel experience you have outside of the United States: ___________________________
### Immunization History

Please attach a copy of immunization record

<table>
<thead>
<tr>
<th>Disease</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td></td>
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<tr>
<td>Hepatitis B</td>
<td></td>
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<tr>
<td>Twinrix</td>
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<tr>
<td>HPV</td>
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<tr>
<td>Influenza</td>
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<tr>
<td>Japanese Encephalitis</td>
<td></td>
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<tr>
<td>MMR</td>
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<tr>
<td>Polio</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>PPD (placed)</td>
<td></td>
<td></td>
<td></td>
<td>(Read)</td>
</tr>
<tr>
<td>Rabies</td>
<td></td>
<td></td>
<td>#3</td>
<td></td>
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<tr>
<td>Tdap/Td</td>
<td></td>
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<td></td>
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<tr>
<td>Typhoid (oral)</td>
<td></td>
<td></td>
<td></td>
<td>Injectable:</td>
</tr>
<tr>
<td>Varicella</td>
<td></td>
<td></td>
<td>#2</td>
<td></td>
</tr>
<tr>
<td>Yellow Fever</td>
<td></td>
<td></td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>
4. Template contents

- Traveller demographics (should on PMS)
- Travel experience esp. with a risk gradient
- Current / past health issues esp. IHD, diabetes, psoriasis, malignancies, immunosuppression, mental health issues, recent surgery/hospitalisation, etc.
- Family history VTE, mental health issues, etc
- Medications – regular and prn’s
- Allergies incl. drugs, vaccine components, dressings
- Pregnancy – current / intended
- Childhood vaccinations, esp. missed vaccinations
4. Template contents

• Itinerary – destination(s) / duration / accommodation / activities
• Departure date (how much time have you got!)
• Vaccine / disease check list
• Malaria prophylaxis
• Medical kit
• Check-list of topics
• Consent

A comprehensive list can be found on CDC: https://wwwnc.cdc.gov/travel/yellowbook/2018/the-pre-travel-consultation/the-pre-travel-consultation#4937
LOVE MORE
TRAVEL MORE
LIVE MORE
5. CHECK-LIST OF TOPICS

• Means you have a system
• Won’t forget essentials
• Can share education between doctor/nurse

BUT EMPHASIZE THE KEY TOPICS
  – To avoid overload
  – In case person does not come back/limited for time
  – Back it up with resources for the traveller to read
5. Checklist example

- Traveller’s concerns
- Flight safety / fitness to fly / VTE
- Vectors - insects / animals
- Food & water safety / diarrhoea mx
- Safety / Security
- Accident / injury
- Sexual safety / Women’s health
- Travel insurance
- Environment / climate
- Special activities (e.g. cycling, diving, caving, trekking, volunteering)
- Cultural awareness
- Special groups (e.g. children; elderly; disabled; VFR, immunocompromised; etc)
Tailor advice - e.g. jungle trek (insects/heat) and full moon party (alcohol/drugs/safety/sex)
5. Special group - VFR travellers

VFR travellers are disproportionately represented in:
- vaccine preventable infections e.g. Hep A, typhoid
- non-vaccine preventable infections e.g. STI, malaria

They are less likely to seek/accept pre-travel advice
They believe they are immune to diseases in home country
They make last-minute travel plans (funerals, family illness)
They do not adhere, or run out of regular medication
They often do not have travel insurance
5. Special group - VFR travellers

NZ 2013 Census 25.2% population born overseas

NZ 2015 departures for < 12 months identified as VFR: 37%

VFR travellers who do seek travel advice, do so from primary care in 75% cases

5. Special group - VFR travellers

• 1/3 VFR Travellers had health problems during travel associated with chronic health conditions
• 60% VFR travellers reported stopping/running out of Rx
• Remember foreign born:
  ● Elderly / Co-morbidities
  ● Immuno-compromised
  ● Immunosuppressed/organ transplants

5. Special group - VFR travellers

- Ensure children, siblings and parents up to date with routine immunisations
- Use catch-up schedules and accelerated schedules
- Consider BCG (if available)
- Discuss likelihood of travel and immunise in anticipation
- Even if unvaccinated, simple advice may change behaviour / risk / outcome
- Consider potential travel in those with chronic health conditions, immunosuppression etc.
- Post travel ask about
  - Health while away / Rx adherence / hospitalisations
  - Future trips – and start preparing
5. Yellow Fever Vaccine

To offer Yellow Fever Vaccination need to apply to the Ministry of Health for authorisation to be:

• Yellow Fever vaccinator

• Yellow Fever vaccination centre
Yellow fever

This section provides downloadable documents on the Policy for the Authorisation of Yellow Fever Vaccinators and Vaccination Centres, forms to apply for or renew authorisation as a yellow fever vaccinator or vaccination centre, and a list of currently authorised Yellow Fever Vaccination Centres in New Zealand.

About yellow fever

Yellow fever is an acute viral haemorrhagic disease transmitted by infected mosquitoes. It is endemic to 44 countries in tropical areas of Africa and the Americas. Infection with the yellow fever virus causes varying degrees of disease, from mild symptoms to severe illness with bleeding and jaundice.

6. RESOURCES

1. Clinician resources

1. Traveller resources

➢ Find your favourite
6. CLINICIAN RESOURCES

• Websites /books for your information
• Disease and vaccine information
• Outbreak alerts
• Updates – journals, conferences, etc
• List of specialists to refer to for Yellow Fever, complex itineraries, high risk activities / destinations / health issues,

  e.g.  http://www.traveldoctor.co.nz/
        https://worldwise.co.nz/
        local specialist travel clinic
6. WHO Resources


➢ Annex 1 the OFFICIAL guideline only gets updated annually, unless exceptional.
6. CDC Resources

https://wwwnc.cdc.gov/travel/page/yellowbook-home

• Updated 2 yearly
• Available in hard copy and electronically.
• has many good features and resources
6. CDC Clinical Information Centre

CDC Yellow Book - Resources for Clinicians

- Clinical updates
- Journal club
- e-Learning resources e.g. Yellow Fever, Malaria
- Professional Travel medicine journals
- Outbreaks
- Resources for travellers
- Counselling sheets, infographics, posters
  etc
6. CDC Travelers Health Website

https://wwwnc.cdc.gov/travel/
6. International Society of Travel Medicine: www.istm.org/

- Journal of Travel Medicine
- Good resources
- Travel ListServ
6. Resources: Outbreak News

Promed mail: http://www.promedmail.org/
Scotland: http://www.fitfortravel.scot.nhs.uk/home.aspx
UK: http://www.healthtravelpro.org.uk/outbreak-surveillance
South Africa: http://www.santhnet.co.za/
WHO/WER: http://www.who.int/wer/en/
Polio: http://www.polioeradication.org/
6. Free access: clinical resources

- Fit for Travel  [http://www.fitfortravel.nhs.uk](http://www.fitfortravel.nhs.uk)
- Travel Health Pro  [https://travelhealthpro.org.uk](https://travelhealthpro.org.uk)
6. Subscription clinical resources

- Shoreland Travax
- Travax UK
- Travax Scotland

https://www.travax.com/
http://www.travax.nhs.uk/
Beware differences, e.g. malaria maps
Beware differences, e.g. malaria maps

Tailor to patient, style & duration of trip & risk factors

CDC
Further helpful resources


6. TRAVELLER RESOURCES

➢ Website links / handouts / apps to give traveller

➢ To cover specific topics:
  • Disease specific e.g. zika, rabies, diarrhoea management
  • Vaccine specific e.g. vaccine side-effects, yellow fever
  • Destination specific e.g. Hajj, Olympics
  • Health specific e.g. diabetes, disability, Coeliac disease
  • Activity specific e.g. altitude, trekking
6. TRAVELLER RESOURCES

➢ Most commonly used:
   • Antimalarials – how to take them
   • Diarrhoea – how to treat
   • Altitude – symptoms, how to take Diamox
   • Travel kits and how to use medications
   • Travel letter listing medical conditions, medications, recent ECG
6. Mobile App’s

6. Handouts e.g. CDC Handout
6. Travel advisory: www.safetravel.govt.nz
6. ADMINISTRATION RESOURCES

• Letter/text confirming appt what to bring
• Leaflet/website on travel services you offer.
• Ordering info – vaccines/products/vaccine booklets/etc.
• Template for traveller to complete BEFORE seeing clinician (could be on-line).
• Hard copies for when system goes down.
7. MEDICAL KITS / CHEMOPROPHYLAXIS

- Pre-made kits with instructions
- Prescriptions on e.g. MedTech
- Off label license e.g. Doxycycline for malaria prophylaxis
- Check interactions with normal meds e.g. QT prolongation.
- Back up instructions useful
  - Treating Traveller's diarrhoea
  - Altitude advice and Diamox
  - How to take antimalarials
  - Vaccination side-effects
7. TRAVEL PRODUCTS FOR SALE

Befriend your local retailer:
• So they stock what you recommend/want
• Might offer discount if you send business their way
• You get to hear about new products (or try them!)

Sell products yourself:
• Insect repellents
• Sunscreens
• First aid/medical kits
• Mosquito nets
• Water purification
8. KNOW YOUR LIMITS

➢ Primary care should be able to advise travellers who are in good health and visiting low-risk destinations with standard planned activities.

➢ Travellers who have complex itineraries or special health needs should be seen by persons who have training in the field such as a specialized travel clinic.
Conflict – income derived mostly from vaccines, but they represent only a very small part of the risk we aim to reduce. We cannot ignore the rest!
Medico-legal responsibility

“A failure to counsel travellers about relevant travel precautions could be considered negligent”

it is essential for those providing travel health to discuss the itinerary and establish all travel health risks that need to be addressed prior to departure. Failure to do so could result in inadequate pre-travel advice, failure to appropriately vaccinate, or inappropriately vaccinate.

Summary

• Need a good knowledge base, and update it
• Have a good system and resources
• It’s all about risk assessment / management
• Avoid information overload
• It’s not all about the vaccinations

References


2. www.istm.org/


References


Thank you