Travel Health Consultation Services in the Occupational Health Clinic

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Objectives:

- Review the role of the travel medicine consultation in supporting health and productivity in the global workforce
- Review and discuss the components of a travel consultation
- Review and discuss the resources necessary to provide travel medicine consultations in the OHC

Why offer travel medicine services in the OHC?

- Support health and productivity of business travelers
- Prepare expats for living overseas
- Broaden scope of services to school groups, missionaries, NGO’s, and leisure travelers
- Adds variety of patients who are (generally) happy to be in clinic
Impact of preparation on health and productivity

• The most common reasons why travelers seek/require medical care are:
  • Food and water-borne illnesses
  • Preventable injuries
  • Unwanted consequences of travel
  • Malaria and TB infection
  • Exposure to BBP
  • Prevention will greatly reduce the risk of these events for the business (and leisure) traveler

Components of the travel medicine consultation

• Education:
  • General safety and injury prevention
  • Food and water safety, insect precautions
• Administration of vaccinations
  • Destination specific vaccinations
  • Required (YF, Meningitis) vs recommended
  • Routine vaccinations
• Medications-self care for travelers diarrhea and anti-malarials, prevention of altitude-related illness

Resources for Travel Medicine Services in the OHC

• Trained, (and enthusiastic) professional staff
• Trained clinical support staff
• Supplies: Vaccines ($$) and medications, insect repellants etc
• Policies: compliance with vaccine storage, etc
• Educational tools
• Business practices (eg: company accounts)
• Marketing
Flow of a travel medicine visit

• Prior to visit: collection of information regarding itinerary, pertinent health history
• At visit: MD or RN review of above data, risk-based education, discussion of recommended/required vaccinations (including VIS) and medications, and; finally, the administration of vaccinations
• Follow up visits as indicated to complete vaccines series
• Follow up visits post-travel prn

General Safety and Injury Prevention

• Common-sense safety
  • Accidents and injuries are the most common travel-related medical problems!
  • Seat belts, avoiding DUI/DWI, preparing for moped use, diving, climbing, etc
  • Stay with guides in unfamiliar regions
  • Wear shoes, do not bathe in streams
  • Use sunscreen

Food and Water Safety

• Avoid undercooked meat and poultry
• Caution for street vendors, home visits
• Keep hot foods hot, cold foods cold
• Use care with incidental water use (ice cubes, fountain drinks, water fountains, tooth brushing, showers)
• Water purification supplies for remote travel
Getting There and Back

• Time zone changes
• Jet lag
• “west is best” often easier to tolerate
• Allow 1-2 hrs/day time adjustment
• Consider sleep aids carefully
• Culture shock education
  • Become familiar with key customs and appropriate dress prior to travel
  • Encourage language familiarity

Required Vaccinations

• Yellow Fever
  • The ONLY required vaccination (for visas/border crossing/cruise ship port calls) to specific locations
  • Certificate required, dated 10 days prior to travel
  • MD may issue medical waiver for those ineligible
  • 2009 ACIP caution for those over 60 who have never received YF vaccine
  • New recommendations for some regions in Brazil, Peru
  • Requirements are set by individual countries, for updates, check with the specific embassy
Destination-specific Vaccinations

- Consider not only the itinerary, but additional risk factors
  - Rural work
  - Extended stay with risk of rural recreational activities
- Japanese encephalitis virus (JEV)
  - New 2-dose vaccine (2 doses 28 days apart) since 2009 –approved in 2013 for all ages
  - ½ dose for ages under 3 years
  - Full dose for ages 3 and above
  - 3 dose vaccine stock expired May 2011
- Meningitis
  - Haaj, the African “meningitis belt”
  - Now on ACIP schedule for teens
  - College requirement for dorms
  - Military requirement for housing during recruit training
  - Recommended for those staying in crowded quarters, hostels, etc

Meningitis Vaccine Update

- Two types of quadrivalent vaccine: (protects against A, C, W and Y serotypes)
  - MCV4 Meningococcal conjugate vaccine: approved for ages younger than 55
  - MPSV4 Meningococcal polysaccharide vaccine: approved for ages 56 and older
- These vaccines do not protect against Serotype B (types B, C, and Y have been associated with outbreaks in the US)
- Newly FDA: approved vaccines for serotype B:
  - October 2014: Trumeba, ages 10-25, 3 dose series
  - January 2015: Bexsero, ages 10-25, 2 dose series
- CDC interim guidance:
2013 ACIP/CDC Recommendations:

- Routine vaccination of adolescents 11-18 years (a single dose of vaccine should be administered at age 11 or 12 years, with a booster dose at age 16 years for persons who receive the first dose before age 16 years) (1,5–7).
- Routine vaccination of persons aged ≥2 months at increased risk for meningococcal disease, including (7–11):
  - Persons aged ≥2 months with certain medical conditions such as anatomical or functional asplenia or complement component deficiency (dosing schedule and interval for booster dose varies by age at time of previous vaccination).
  - Special populations such as unvaccinated or incompletely vaccinated first-year college students living in residence halls, military recruits, or microbiologists with occupational exposure (indication for booster dose 5 years after prior dose if at continued risk).
  - Persons aged ≥9 months who travel or reside in countries in which meningococcal disease is hyperendemic or epidemic, particularly if contact with the local population will be prolonged.


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Destination-specific Vaccinations

- Hepatitis A
  - Now on ACIP pediatric schedule
  - 2 doses 6 months apart
  - Combination vaccine with Hep B available

- Typhoid
  - Oral (live)-4 doses, must be refrigerated, taken over a course of 7 days, protection lasts 5 years
  - Inactive (IM)-lasts 2 years

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Destination and Risk-Based Vaccinations

- Rabies-education for many, vaccine for few
  - Groups at risk-animal researchers, cave explorers, the very risk averse traveler

- Hepatitis B
  - On ACIP vaccination schedule since mid-1990s
  - Groups at risk-BBP exposures, expats
  - Combination Hep A and B vaccine available (standard and accelerated administration schedules)
Vaccine-preventable diseases—routine vaccinations

- Influenza (flu)- annual vaccination—remember year round flu prevalence (not just US season)
- Tetanus-booster every 10 years
- TdP once for all aged 11-64
- Measles, mumps, rubella (can titer if unsure)
- Varicella (can titer if unsure)
- Pneumovax for ages over 65 and chronic illnesses, asplenic
- IPV booster for areas of concern

PPD testing pre-travel

- Useful as a baseline for those traveling to endemic areas
- Repeat PPD 10-12 weeks after return
- Consider for missionary workers, HCW to endemic areas, long term expats

Preventing insect-borne diseases

- Remember the hierarchy of controls!
- Use insect repellant (DEET), permethrin-treated clothing, bednets, window screens
- Avoid standing water
- Avoid peak "feeding" times for mosquitoes
  - Dawn
  - Dusk
  - Wetland areas, rainy season
  - Some mosquitoes bite throughout the day
- Antimalarials—vary by location
Antimalarials 101

- Chloroquine—weekly, few areas still sensitive
- Doxycycline—daily, avoid sun exposure, not for pregnant women or young kids
- Atovaquone/proguanil (Malarone)—daily, not for pregnant women, 
- Mefloquine—weekly, avoid in those with psychiatric histories, cardiac conduction abnormalities, and/or history of previous adverse effects; useful for young kids

Medications

- Travel medical kit
- Include labeled supply of prescription and over the counter medications used regularly
- Beware of confiscation of “bagged” meds
- “First aid self-care meds and injury care supplies, bandages, antibiotic ointment, ace wrap, allergy meds, anti-diarrheals, Pepto Bismol, Benadryl, NSAIDS
- Communicate with airlines and treating MD for supplemental oxygen and injectable medications

Self-care for Travelers’ Diarrhea (TD)

- TD affects 20-50% of travelers annually per the CDC
- Travelers should be educated on symptoms of TD
- Self-care allows rapid, appropriate care to decrease lost travel time, and lost productivity
- Medication depends upon itinerary:
- For adults:
  - Ciprofloxacin (or alternative Fluoroquinolone) 500 mg BID for 1-3 days
    - If not better in 36-48 hours, suspect resistant Campylobacter and change to Azithromycin
  - Thailand and India: Azithromycin 500 mg QD for 3 days
- For ages under 18 years: Azithromycin (pediatric dosing)
- Beware of QT prolongation related to Azithromycin
Prophylaxis for TD

- **PROPHYLAXIS: VACCINE**
  - A vaccine (Dukoral) protects against ETEC—not avail in US

- **PROPHYLACTIC MEDICATIONS: ANTIBIOTICS**
  - Not routinely recommended, few studies
  - Consider for travelers who are immunosuppressed
  - Should generally be restricted to periods of less than a week

- **PROPHYLACTIC MEDICATIONS: NON-ANTIBIOTIC METHODS**
  - Bismuth subsalicylate (BSS) - Pepto-Bismol in liquid form-for 3 weeks max use
  - Contraindicated in: Children less than 12 years of age and should be used with caution in older children and adolescents with viral infections because of the risk of Reye syndrome, pregnant or nursing women, travelers with ASA allergy, renal dz or gout, persons taking anticoagulants, probenecid, doxycycline, ASA or methotrexate


Prevention of Altitude-related illness

- **SLOW ASCENT (3000 ft max/day over 10K)**
- Acetazolamide 250 mg BID (higher doses used by military)
  - Start one day before climbing
  - Continue until 48 hrs at max altitude
  - Climb slowly!

- **Treatment of AMS**
  - DESCENT
  - Dexamethasone, O2

New Horizons

- Pediatric travelers
- Geriatric travelers
- Travelers with chronic diseases
- Adventure and eco-travel
- Immunosuppressed traveler
- Visiting Friends and Relatives (VFRs)
Resources:

- www.cdc.gov
- International Society of Travel Medicine
  http://www.istm.org/
  - Pediatric meds and vaccinations reference
- Shoreland Travax web-based tool ($$)
- For travel information for US citizens
  - http://travel.state.gov
- CDC Vaccine VIS site:
  http://www.cdc.gov/vaccines/hcp/vis/index.html?s_cid=cs_74