THE PRE-TRAVEL CONSULTATION

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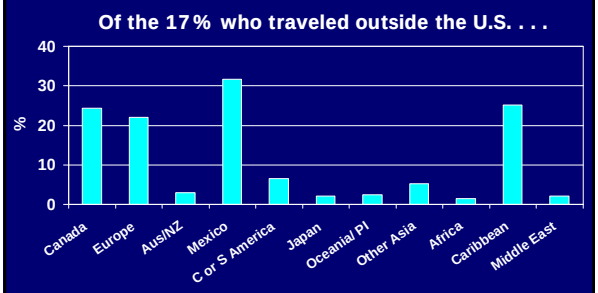
Selected Topics

- Travelers' Health Epidemiology
- Traveler Assessment
- Itinerary Review
- Sources of Information
- Risks to the Traveler
- Travel Vaccines
- Travel Medications
- Common Diseases
- Counseling

Where Do U.S. Residents Travel?



Source: HealthStyles Survey 2005

VFRs: Visiting Friends and Relatives

- Foreign-born increased 57% since 1990 from 19.8 million to 31.1 million
- 20% of US population are first- or second-generation immigrants
- VFRs comprised ~46% of US international air travelers in 2004

Travelers' Health Risks

Of 100,000 travelers to a developing country for 1 month:

- 50,000 will develop some health problem
- 8,000 will see a physician
- 5,000 will be confined to bed
- 1,100 will be incapacitated in their work
- 300 will be admitted to hospital
- 50 will be air evacuated
- 1 will die

The Patient: Medical Issues

- Age-specific issues
- Underlying illness, immunosuppression
- Systems review
- Medical history
- Medication use
- Vaccination history
- Allergies (egg/latex)
- Contraindications to vaccines and medications

The Patient: Other Issues

- **Pregnant Travelers, i.e. malaria**
- **Risk-taking behaviors, i.e. treking in Nepal**

Travel Itinerary

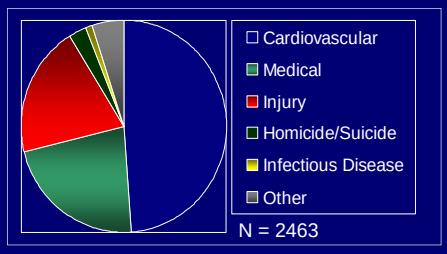
Factors that affect pre-trip counseling

- **Full itinerary**
  - Dates, duration, stopovers
  - Seasonal considerations
- **Styles of travel**
  - Rural vs. urban
  - Budget vs. luxury
- **Activities**
  - Business vs. tourism vs. humanitarian
  - Adventure, safari

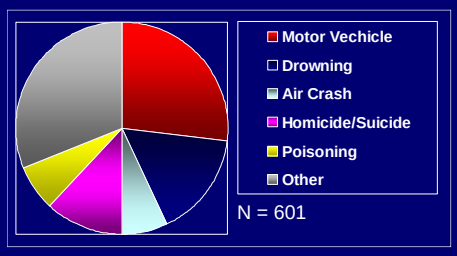
Travel Health Resources

- **CDC Travelers' Health Website**
  - www.cdc.gov/travel
- **World Health Organization**
  - www.who.int/int
- **State Department**
  - travel.state.gov **(register with embassy)**
- **International Society of Travel Medicine**
  - www.istm.org
- **Health Information for International Travel**
  - **CDC "Yellow Book"**
- **International Travel and Health**
  - **WHO "Green Book"**

Deaths Related to International Travel



Injury Deaths and International Travel



Other Risks to the Traveler

- Accidental injury
- Environmental hazards (volcano/earthquake)
- Crime and assault (Rio or Johannesburg)
- Psychiatric problems
- Animal bites, stings and envenomations
- Dermatologic disorders (fungal infections)
- Altitude

Infectious Disease Risks to the Traveler

- Malaria*
- Diarrhea
- Leishmaniasis*
- Rabies
- Dengue*
- Meningococcal Meningitis
- Schistosomiasis*
- Tuberculosis
- Leptospirosis*
- Polio
- Yellow Fever
- Measles
- JEV

Malaria

- Transmitted by female anopheles mosquito
- In 2010:
  - 216 million cases
  - 655,000 deaths
- Half of world's population lives in a malarial zone
- Symptoms can occur several months after exposure
  - Severe flu-like presentation: fever, chills, myalgias
- Malaria is suggested by the triad of thrombocytopenia, elevated LDH, and atypical lymphocytes. Obtain malarial smears if patient is recently in malarial area. Treatment: Antimalarials.

Malaria

- Prophylaxis
  - Chloroquine
    - Weekly; Central America
  - mefloquine (Lariam)
    - Weekly; Significant side effects
  - atovaquone/proguanil (Malarone)
    - Daily
  - Doxycycline
    - Daily; Photosensitivity
  - Primaquine
    - Daily; Contraindicated in G6PD

Leishmaniasis

- Sandflies (1/3 size of mosquitos)
- Cutaneous manifestations
  - Papules → Nodules → Ulcers

- Self-limiting
  - Up to 2 years for resolution
  - Occasionally treated with sodium stibogluconate (Pentostam) or meglumine antimonate (Glucantime)
- Less common: mucosal and visceral manifestations

Dengue Fever

- Aedes Mosquito
- Urban and rural areas
- "Break-bone fever"
- No Vaccine
- Myalgias, fever, headache, rash
- Self-limiting
  - Usually 1 week
  - Fatigue and depression can last for months
- Rare: dengue hemorrhagic fever

Schistosomiasis

- Parasite larvae penetrates intact skin
- Associated with fresh-water activity
- Diagnosis: microscopic evidence of schistosome eggs in stool or urine
- May Lead to Katayama Fever
  - Fever
  - Loss of appetite
  - Abdominal pain
  - Headache
- First-Line Treatment: praziquantel (**antihelmintic** drug)

Leptospirosis

- "Weil's Disease" "Mud Fever" "Swineherd's Disease"
- Spirochete infection through abrasions or mucus membrane
- Associated with fresh-water activity
- Diagnosis: Identifying leptospires in urine, blood, CSF, or tissue

- Treatment or Prophylaxis with doxycycline

Immunizations to Consider for Adult Travelers

Routine	Destination-Specific
Diphtheria*	Hepatitis A
Tetanus*	Hepatitis B
Pertussis*	Typhoid
Measles +	Rabies
Mumps+	Meningococcal disease
Rubella +	Polio
Varicella	Japanese encephalitis
Pneumococcus (smokers/asthmatics)	Yellow fever
Influenza	

* Td or Tdap
\+ MMR

Travel Medications: Prophylaxis & Self Treatment

- Diarrhea
  - quinolone, azithromycin
- Altitude
  - acetazolamide
- Motion sickness
  - scopolamine, dimenhydrinate (Dramamine), meclizine (Bonine)

Travel Preparation

- Travel health insurance
  - Medical care/Hospitalization/Evacuation
  - www.insuremytrip.com
  - www.quotetravelinsurance.com
- Obtaining medical care abroad
  - (IAMAT – free to join)
- Awareness of travel notices
- Hand washing and hygiene

Food and Water Precautions

- Bottled water
- Selection of foods
  - well-cooked and hot
- Avoidance of
  - salads, raw vegetables
  - unpasteurized dairy products
  - street vendors
  - ice

Vector Precautions

- Covering exposed skin
- Insect repellent containing DEET 25 – 50%
- Treatment of outer clothing with permethrin
- Use of permethrin-impregnated bed net
- Use of insect screens over open windows
- Air conditioned rooms
- Use of aerosol insecticide indoors
- Use of pyrethroid coils outdoors
- Inspection for ticks/bedbugs

Bloodborne and STD Precautions

- Tattooing and body piercing
- Blood products
- Unprotected sexual activity
- Medical/Dental Tourism

Travel Emergency Kit

- Copy of medical records and extra pair of glasses
- Prescription medications
- Over-the counter medicines and supplies
  - Analgesics
  - Decongestant, cold medicine, cough suppressant
  - Antibiotic/antifungal/hydrocortisone creams
  - Pepto-Bismol tablets, antacid
  - Band-Aids, gauze bandages, tape, Ace wraps
  - Insect repellant, sunscreen, lip balm
  - Tweezers, scissors, thermometer

Questions?

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