CREATING A TRAVEL CLINIC:

The Importance of Travel Health Services in a College Setting

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Objective #1

How does international travel affect the health of college students?
Objective #1 discussion

- Identify current trends in U.S. students studying abroad
- Define travel health care
- Identify travel health risks
CURRENT TRENDS

- 2007/08: 262,416 US students studied abroad
  - An increase of 8.5% over the previous year

- New York had a total of 21,277 students studying abroad in 2007/08
  - 10.9% increase from the previous year

(The Institute of International Education–Open Doors 2009)
CURRENT TRENDS

American students are increasingly traveling to less traditional places including:

- China
- India
- Japan
- South Africa
- Argentina

(The Institute of International Education–Open Doors 2009)
CURRENT TRENDS

- 2007/2008: % increase in the number of students studying abroad:
  - Africa –18%
  - Asia –17%
  - Latin America – 11%

(The Institute of International Education–Open Doors 2009)
College Students Travel For:

- Study Abroad
- VFR (Visiting Friends and Relatives)
- Volunteer work
- Leisure
Duration of Study Abroad 2007/08

Institution Type: Baccalaureate

Total Study Abroad Students: 39,626

Short-term 45.1%
(summer, January term, or 8 weeks or less during academic year)

Mid-length 49.8%
(1-2 quarters or 1 semester)

Long-term 5.1%
(academic or calendar year)

(The Institute of International Education–Open Doors 2009)
Risk Assessment:

- **Destination:** developed vs. developing country

- **Activity planned:** volunteer work vs. a stay at a 4 star resort

- **Accommodations:** hut or cabin vs. hotel or hostel
Risk Assessment:

- Duration of trip
- Rural vs. Urban
- Travel alone or in group
- VFR – (Visiting Friends or Relatives)
- Cautious vs. risk taker
International Students in the U.S.

- Fall 2008: 15.8% increase of students enrolling for the first time at a U.S. institution (over previous year)

- 2008/09: 671,616 of international students in the U.S.
  - Increased 7.7% over the previous year

(The Institute of International Education– Open Doors 2009)
International Students in the U.S.

Top 5 places of origins:

- India
- China
- South Korea
- Canada
- Japan

(The Institute of International Education– Open Doors 2009)
International Students in the U.S.

- New York ranked #2 in Top U.S. states hosting international students

- New York 2008/09: 74,934 International Students
  - 7.3% increase from previous year

(The Institute of International Education– Open Doors 2009)
Travel health care is an interdisciplinary specialty concerned with the prevention, management and research of health problems associated with travel. ISTM, 1998

Health promotion and disease prevention are the cornerstones of this specialty.
The Importance of Travel Health Measures

- 100,000 travelers to developing world for 1 month
  - 50,000 travelers will develop some sort of health problem during the course of their trip
  - 8,000 travelers will see a physician
  - 5,000 travelers will be confined to bed
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*
Vaccine Preventable Diseases

**Routine**
- Tetanus
- Diphtheria
- Pertussis
- Hepatitis B
- Varicella (Chicken pox)
- Pneumococcal
- Polio
- Influenza
- MMR
Vaccine Preventable Diseases

Travel Related

- Hepatitis A
- Hepatitis B
- Typhoid
- Yellow Fever

- Poliomyelitis
- Meningococcal Meningitis
- Rabies
- Japanese Encephalitis
Not Vaccine Preventable...

- Malaria
- Avian Flu
- Dengue
- Travelers’ Diarrhea
- TB
Diseases Spread by Vector

- Malaria
- Yellow Fever
- Japanese Encephalitis
- Dengue
- Leishmaniasis
Objective #2: Identify Need

- Create a Travel Log
- Conduct a Needs Assessment Survey
Travel Log

Create a form where each clinician lists:

- Name of Student
- Date
- Country/Countries plan to visit

This allows the Travel Health Coordinator to keep track of students traveling abroad
## Study Abroad at Barnard

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Total Enrolled</th>
<th>Full Year</th>
<th>Fall Only</th>
<th>Spring Only</th>
<th>Summer</th>
<th>Study Abroad Total</th>
<th>Countries</th>
<th>% of Study Abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007–2008</td>
<td>2,346</td>
<td>19</td>
<td>49</td>
<td>140</td>
<td>16</td>
<td>224</td>
<td>36</td>
<td>10%</td>
</tr>
<tr>
<td>2008–2009</td>
<td>2,359</td>
<td>19</td>
<td>50</td>
<td>131</td>
<td>17</td>
<td>217</td>
<td>41</td>
<td>11%</td>
</tr>
<tr>
<td>2009–2010</td>
<td>2,417</td>
<td>23</td>
<td>32</td>
<td>132</td>
<td>21</td>
<td>208</td>
<td>36</td>
<td>12%</td>
</tr>
</tbody>
</table>
**Needs Assessment Survey**

- Research need/demand for travel vaccines via travel log and CDC recommendations
- Research cost and shelf life of vaccines to assess cost effectiveness
Register to be Yellow Fever Clinic

- Contact CDC YF Coordinator – Theresa Sommers
  email contact: dqyellowfever@cdc.gov

- NYSDOH contact: Cindy Robinson to register for YF vaccine and get stamp certification (no fee)

- Contact U.S. Government Printing Office @ 1866-512-1800 to order International Certificate of Vaccination or Prophylaxis (ICVP) CDC 731 Form
Yellow Fever Vaccine:

Assess for actual YF risk factors

- Required for Entry—countries petition WHO to make this required for travelers crossing their borders
- Recommended for travel to endemic area
Yellow Fever Vaccine:

Document: per WHO

- ICVP

- Give at least 10 days before entry

- Protects 10 years

- Clinic does not need to open up to the public, can choose not be listed on public website
Objective #3: Establish Foundation

- Essential elements of a travel clinic
- Identify useful resources
Practice Site Requirements

- One subscription database search service
- Dedicated refrigerator (freezer)
- Immunization equipment and supplies
- Emergency Response supplies
- Medical waste contract
Framework of a Travel Clinic

- Policies and Procedures
- Templates
- Trained Personnel
- Travel Itinerary Questionnaire
- Web Page
Policies & Procedures

- Anaphylaxis protocol and management of adverse reactions
- Standing orders for vaccines
- Immunization documentation
- Infection Control/ Needlestick protocol
- Risk Communication: VIS, consent, waiver
In the U.S. the NCVIA (National Childhood Vaccine Injury Act) mandates:

- Date of administration
- Provider name and address
- Manufacturer and lot #
- NY– requires site of administration
Immunization Documentation

- VIS with edition date

- It is a requirement of the National Childhood Vaccine Injury Act of 1986 to provide VIS to the patient, or guardian of child
As of June 2009, VIS’s that must be used are:

- DTaP
- TD
- MMR
- Polio
- Hepatitis A
- Hepatitis B
- Hib
- Varicella
- Influenza
- Pneumococcal Conjugate
Policies & Procedures

- Cold Chain Compliance – “Vaccine Storage and Handling Toolkit” @ http://www2a.cdc.gov/vaccines/ed/shtoolkit/pages/storage_equipment.htm

- Refrigerator Disaster Plan/ Emergency Storage

- NCVIA/HIPPA compliance

- VAERS – Vaccine Adverse Event Reporting System
Create Templates for Documentation

- Travel Vaccine
- Travel Health Counseling
Identify Useful Resources

- CDC: [www.cdc.gov/travel](http://www.cdc.gov/travel)
- Immunization Action Coalition [www.immunize.org](http://www.immunize.org)
- WHO: [www.who.int/ith](http://www.who.int/ith)
- U.S. State Department: [www.travel.state.gov](http://www.travel.state.gov)
- ACIP statements
- CDC Yellow Book, Blue Book (Thompson), CDC Pink Book
Useful Resources

Subscriptions:

- Travax @ www.shoreland.com
- Tropimed @ www.tropimed.com
- TravelCare@ www.travelcare.com
Essential Tool for Travel Clinic: Travel Medicine Subscription (ex: Travax)

Many Benefits which can include:

- Individualized plan
- Maps for risk of Malaria and Yellow Fever
- Literature Watch
- News Alerts
Results of Thorough Search

- Creates list of potential vaccines
- Identifies need for patient medications
- Creates list of potential education topics
Results of Thorough Search

- Helps with planning and prioritizing: assessment, vaccine schedule, patient teaching, consultation and referrals

- Suggest considerations for post trip evaluation
PRE-TRAVEL CONSULTATION

- Risk Assessment: hx, destinations, activity planned, duration of trip
- Travel Health Counseling – Advice to reduce exposure to health risks
- Immunization
PRE-TRAVEL CONSULTATION

- Chemoprophylaxis: i.e. malaria, AMS
- Advice on Self Treatment: ex: Prescription for travelers’ diarrhea
Infectious Diseases Society of America
Practice Guidelines

Minimum Counseling Points
- Vaccine –preventable diseases
- PPM
- Malaria chemoprophylaxis
- TD prevention and self treatment
- Personal behavior and safety
- Travel Insurance
- Access to care abroad

Pre-Travel Visit – Tools To Utilize:

- Berna Traveler’s Companion Booklet: order @ www.bernaproducts.com/edumat.html

- CDC handouts: Preventing Malaria in Travelers@ www.cdc.gov/malaria/resources/pdf/travelers.pdf

- GlaxoSmithKline: Understanding Malaria

- CDC VIS
Travel Health Counseling

Topics discussed may include:

- Malaria Chemoprophylaxis
- Food and Water Precautions
- Travelers’ Diarrhea – prescription
- Rabies risk – prevention & post exposure prophylaxis
Travel Health Counseling

- Sun and Heat Protection
- Altitude Sickness
- Motion Sickness
- MVA/Personal Safety
Travel Health Counseling

- Recreational Safety
- Air travel/DVT Prevention
- Avoid swimming in fresh water due to parasitic larvae
Travel Health Counseling

- Tuberculosis—**Pre–PPD and Post–Trip PPD***
- Dengue Fever
- Avian Flu
- HIV and STD prevention
- Contraception
Travel Health Counseling

- Travelers Medical kit
- Travelers with special health needs
- Travel Insurance–Access to care abroad (ex: International SOS)
Post Trip Follow Up

You should see a medical provider if:

- Spent 3 months or more in rural areas in the developing world
- Told you had or suspected to have malaria
- Treated or hospitalized for medical illness
Post Trip Follow Up

- Continue to have unusual ongoing symptoms
- Engaged in activities that may have exposed you to increased health risks
Outreach to Target Groups:

- Study Abroad Students
- International Students
- Groups/clubs on campus
Promoting Travel Clinic Services

- Create Webpage
- Contact Study Abroad Dean
- Health Orientation Presentation
Promoting Travel Clinic Services

- Table events on campus such as: Study Broad Fair, Health Fair
- Work with Health Educator, Student Government Committee
How to keep current as a Clinician

- CDC, IAC websites
- ISTM, ATHNA, ASTMH
- Travel Health Journals: ISTM Journal of Travel Medicine, Travel Medicine and Infectious Disease
- Present updates and new developments on vaccines and infectious diseases at staff meeting
Professional Development

- Attend the Westchester Course–Course Director: Gail Rosselot, ANP @http://travelhealthservicesandeducation.com

- Attend conferences – CE activity

- ISTM Exam–Certificate of Knowledge
Professional Development

- Case presentations
- Experience: Continue to see patients as many pre-travel consultations
- QA review: ex: Happiness Survey or tracking results
- Journal club
Information Resources

Governmental Resources:

- **CDC Yellow Book: Health Information for International Travel 2010** (Yellow Book)
  Download at: [www.cdc.gov/travel/](http://www.cdc.gov/travel/)
  Order hard copy at Elsevier [www.elsevierhealth.com](http://www.elsevierhealth.com) (800) 545-2522

- **CDC 11th Edition of Epidemiology and Prevention of Vaccine Preventable Diseases (June 2009)** (Pink Book)
  Download at: [www.cdc.gov/nip/publications/pink/](http://www.cdc.gov/nip/publications/pink/)
  Order hard copy at Public Health Foundation at (877) –252–1200

- **International Travel and Health 2010** (Green Book)
  The World Health Organization
  Download at [www.who.int/ith](http://www.who.int/ith)
Other Print Resources:

- **Red Book: Report of the Committee on Infectious Diseases**
  Committee on ID; American Academy of Pediatrics
  Order at: [aapredbook.aappublications.org](http://aapredbook.aappublications.org)

- **National Geographic Atlas of the World**
  National Geographic Society
  (Any atlas will do providing it is detailed, politically current and shows elevations in feet or meters.)

- **Travel and Routine Immunizations** (Blue Book)
  Published by Shoreland, Inc. 18th edition 2009–2010
  Order at: Shoreland [www.shoreland.com](http://www.shoreland.com) (800) 433–5256

- **Traveler's Vaccines**
  Jong and Zuckerman

- **Vaccines**
  Plotkin, Orenstein and Offit
  Saunders, 5th edition 2008