

ATHNA Travel Health Nursing *Model Core Curriculum*

ATHNA has created this model curriculum to help guide the educational development of nursing professionals entering the specialty of travel health nursing. It is designed to raise the standard of travel health nursing practice to achieve greater professional uniformity as well as quality of care. Travel health is a dynamic field, and this curriculum will continue to evolve as the specialty evolves and the health and safety needs of travelers change.

The curriculum is comprised of the knowledge, skills, and attitudes recommended for the competent nursing professional to practice travel health nursing in the United States. Major content areas include a description of the specialty, awareness, and resources for national and international standards of travel health care, the pre-travel and post-travel assessment of the traveler and itinerary, global epidemiology of health risks to the traveler, vaccinology, prevention of travel-related injury and illness, and customized, motivational health counseling designed to maximize the health and safety of diverse travelers. Each section includes applicable practice regulations as well as resources for the professional nurse and the traveler.

This curriculum comprises elements of *Travel Health Nursing: Scope and Standards of Practice, 1st ed.*, the *ISTM Body of Knowledge*, the *RCN Guidance on Travel Health Nursing Career and Competencies* and the *RCN "ABC Health" Certificate Course, The Practice of Travel Medicine: Guidelines by the Infectious Diseases Society of America*, The Foundation Course in Travel Medicine awarded by the Royal College of Physicians and Surgeons of Glasgow, The Westchester Course, the *CDC Health Information for International Travel*, the *WHO International Travel and Health*, and *CATMAT Information for Travel Health Professionals*, as well as content in travel health texts and select articles in peer reviewed journals.

How to Use This Curriculum

Presently there are no academic centers in the United States that offer a nursing concentration in travel health. The UK and the Netherlands both have such programs. This curriculum was initially developed to help address that gap in nursing education. First developed in 2002, over the years this curriculum has served as a foundation for several short courses and CE activities offered by nurse experts, the CDC Travel Health Branch, the CIA, the Smithsonian, and many others. Currently it is posted on the ATHNA website and available for use by individuals and groups seeking to educate nurses in the specialty.

Progressing from novice to expert the travel health nurse should master knowledge and skills in these content areas:

I. Global Health and Travel in the 21st Century

Globalization and Travel Health

Geographic Epidemiology / Global Distribution of Diseases, Health and Safety Hazards

International Travel Statistics and Travel Health Trends

Role of WHO and the International Health Regulations
World Geography: Regions, countries, health and safety resources, political stability
Basic Concepts of Travel Health Epidemiology: terminology
CDC, PAHO, World Tourism Organization, Other key travel health stakeholders
Concept of One Health

II. Defining the Specialty

As per Travel Health Nursing: Scope & Standards of Practice, 1st ed. (2021) which includes the Application of Code of Ethics Provisions by Travel Health Nurses

The What, Who, Where, When, How and Why of Travel Health Nursing?

History of Travel Health Nursing: U.S. and Globally

Prevention as the Cornerstone of Professional Practice: Travel Health Nursing Objectives

Travel Health Professional Roles

- Pre-travel, In-transit, Post-travel, Trip Support

- Supervisory roles

- Consultant to organizations, communities, governments, and others

- Teaching: Academic settings, CE programs, lay audiences

- Publications: professional and lay literature

- Policy development

- Leadership roles within professional organizations

Travel Health Nurse Settings

- Employee Health

- College Health

- Private Travel Health Clinics

- Medical Centers

- Public and Community Health

- Military

- Government and International Organizations

- Other Settings

Travel Health Education and Training

- Formal education

- Continuing education

U.S. national standards: role of CDC, ACIP

State Scope of Practice Regulations and state standards for travel health care

Malpractice and travel health nursing

Physicians, Pharmacists, Tour Operators, Travel Agents: Roles and Trends

U.S. Professional Nursing Organizations for Travel Health Nurses: ATHNA, Interest Groups of ACHA, AAACN, AAOHN, others

International Perspective-International Society of Travel Medicine (ISTM), RCN, NECTM, SASTM, APTHS, others

Research Activities and Opportunities in the Specialty

III. Health and Safety Risks of Travel

A. Introduction: The *True* Risks of Travel

Defining Travel Hazard, Travel Risk

GeoSentinel, GlobalTropiNet, CDC, and WHO Data

Injuries

Vaccine preventable vs non-vaccine preventable conditions

Diseases: Vectors, Person-to-person Contact, Ingestion, Environmental Exposures

B. Injuries

Motor Vehicle Data

Drowning

Adventure travel-related

C. Infections by Vectors

Malaria

Aedes Illnesses

Japanese Encephalitis

Rabies

Rickettsial diseases

Extensive Listing of Others: see CDC and ISTM Body of Knowledge Listings

D. Infections by Ingestion

Traveler's Diarrhea

Hepatitis A

Hepatitis E

Typhoid fever

Cholera

Additional Viruses and Parasites: CDC and ISTM Body of Knowledge Listings

E. Infections by Personal Contact

Covid

RSV

Measles

Hepatitis B and C

HIV

STI's

Varicella

Polio
Monkeypox
Others: CDC and ISTM Body of Knowledge Listings

F. Infections by Environmental Exposures

Jellyfish envenomation
Leptospirosis
Schistosomiasis
Others: CDC and ISTM Body of Knowledge Listings

G. Environmental Hazards

Risks of air transportation: air cabin issues, DVT/PE, jet lag
Environmental: heat issues, cold conditions, air pollution, sun issues, altitude, salt, and fresh water
Motion Sickness
Barotrauma
Others: CDC and ISTM Body of Knowledge Listings

H. Safety and Security

Personal Safety
Role of U.S. State Department & TSA
Death during travel

I. Psychosocial and Cultural Issues

Culture Shock
Jerusalem Syndrome
Drug and Alcohol Abuse
Sexual Assault
Female Genital Mutilation
Sex trafficking

IV. Travel Health Nursing Service Delivery

Overview

Per *Travel Health Nursing: Scope and Standards of Practice, 1st edition*:

Pre-Travel Services

Post-Travel Services

In-transit Services

Administrative and Educational Services

A. Pre-Travel

Goals of the encounter- in-person or virtual

Critical Skills: world geography, map reading, health assessment with diverse populations, understanding risk assessment and risk management/ reduction, basic epidemiology terminology, knowledge of different international guidelines

Systematic Assessment of Traveler: health history, age, gender, allergies and medications, immunizations, pregnancy, immune suppression, reason for travel, prior travel experience, self-care agency

Assessment of Itinerary: dates of travel, all destinations, rural vs urban travel, possible trip extensions, trip transportation and planned activities, accommodations, potential at risk exposures (e.g., animals, fresh water, sick persons)

Care Plan

- Immunizations (see Section V)
- Health Counseling (see Section VII)
- Consultations and Referrals

Confidentiality

Documentation

Evaluation

Regulations and Legal Issues: National, State, Institutional
Resources for pre-travel care

B. In-transit Care

Goals of the encounter

Telehealth

International Resources & Accessing Care Abroad

Regulations and Legal Issues for Nurses

C. Post-Travel Services

Goals of the encounter

General approach to the returned traveler: symptomatic vs asymptomatic

Triage

Evaluation of ill or injured traveler

The traveler with fever

The traveler with diarrhea

The traveler with respiratory symptoms

The traveler with skin and soft tissue infections

Communicable Diseases-precautions and reporting requirements
Documentation
Regulations and Legal Issues for Nurses
Evaluation
Resources for post-travel care

V. Travel Vaccinations and Vaccine Administration

Principles of Vaccinology
The 3 R's: Routine, Recommended and Required Vaccines
Adult Vaccinations (list of US)
Pediatric Vaccinations (list of US)
U.S. Vaccination Standards: ACIP, VFC
CDC Vaccine Administration Guidelines: storage, handling, gloving, etc.
VIS forms
Contraindications and Precautions
Consents and Waivers
Adverse Events Management/ VAERS
Current issues and approaches: Vaccine hesitancy, vaccine costs around the world
International Standards / Differences
Regulations and Legal Issues
Documentation: Federal, Institutional and CDC guidelines (ICVP)
Resources for Professionals and Travelers

VI. Travel Health Medications for Prophylaxis and Self-treatment

Medications for travel: Malaria, Acute Mountain Sickness, Traveler's Diarrhea, Jet Lag, Motion Sickness, Leptospirosis, other
Traveling with medications/ obtaining medications abroad / international restrictions on certain medications
Travel medical kits
Regulations and Legal Issues

VII. Prevention Counseling

Principles of Health Counseling- adult learning / teach-back method
Risk Perception, Risk Reduction, Mitigation, and Management: Effective Messaging Techniques
Counseling topics for travel:
 Exacerbation of acute or chronic health issues
 Use of travel medications
 Food and Water /Water disinfection
 Motor Vehicle Accidents
 Personal Safety and Security / assault/ sexual assault

- Contraception, STIs
- Altitude Illness
- Vector borne Illness/ PPM
- Climate: heat, cold, sun
- Self-care on the road
- Travel medical insurance: 3 types-travel insurance, travel health insurance, medical evacuation
- Travel stress and psychological well-being

Government and non-governmental educational resources for the professional and the traveler

Documentation

Evaluation

Regulations and Legal Issues

VIII. Travel Clinic Operations

- Starting a nurse-run or managed travel clinic
- Operational issues: staffing, supplies, decision support systems, financials, marketing
- Practitioner knowledge, skills, and attitude
- Policies and Procedures, Standing orders
- Communication with patients: telephone, email, text, telehealth
- Clinic Documentation
- Regulations and Legal Issues: federal, state, site policies
- Resources and Tools for the Clinic: ATHNA, IAC, etc.
- Providing care to the traveler with limited resources of time or funds

IX. Travel Issues for Special Populations

- Defining special populations- who and why?
- Assessing for fitness-to-travel and accommodation
- Infants and Children
- Seniors
- Women
- LGBTQ
- Persons with co-morbidities: acute illness, chronic illness, disabilities
- Severe Allergies
- Immunosuppression including HIV
- Pregnancy
- VFR
- Last Minute Travelers
- Ex-pats and Long-stay travelers
- Cruise passengers
- Hajj pilgrims and other mass gatherings
- Healthcare workers

International adoption
Students
Business travelers
Medical tourist (elective medical treatment abroad)
Migrants and Refugees
Military personnel
Missioners and humanitarian aid workers
Scuba divers
Spelunkers
Other travel populations: See *Travel Health Nursing Glossary*
Resources for professionals and travelers

X. Psychological Issues and Travel

Psychological disorders and impact on travel
Psychological Emergencies Abroad
Cultural Adaption and Re-entry Issues
Repatriation
Resources for Professionals and travelers

XI. Effects of Travelers on Host Countries

The Responsible Traveler

XII. Continuous Professional Development

Professional obligation in a dynamic field
Online resources: Courses and Conferences
International options

XIII. Future Trends

Dynamic and rapidly evolving specialty
More travel and travelers with diverse itineraries
More senior and student travel
Advancing technology for travelers and for travel health providers
One Health- greater interaction and impact of humans, animals, and the environment
Vaccines and vaccinology developments
Cost containment within medical care
Expanding role of the nursing profession / legal implications

Recognition of the larger global role of travel health nursing professionals
US travel health nursing education expansion
Expanding role of ATHNA
US travel health nursing certification

Resources for the Curriculum

Travel Health Nursing: Scope and Standards of Practice, 1st edition (2021)

Glossary of Travel Health Nursing Terminology (ATHNA website www.athna.org)

CDC Infectious Diseases Related to Travel (CDC Yellow Book, Chapter 3, www.cdc.gov/travel)

ISTM Body of Knowledge (www.istm.org.)

Review Articles

Bazemore AW. The Pre-travel consultation. *Am Fam Physi*, 2009, Sep 15: 80(6): 583-90.

Freedman, D. Malaria prevention in short-term travelers. *NEJM* 2008; 359 603-612.

Jenks, N. *Nurse Pract*. 2012 Jan 19; 37(1):1-7 Travel health: safety and preparation strategies for clinicians.

Rosselot, G. (2004) Travel health nursing: Expanding horizons for occupational health nurses. *AAOHN J*, 52(1), 28-41.

Ryan, E and Kain, K. (2000) Health advice and immunizations for travelers. *New England Journal of Medicine*, 342(23), 1716-1725.

Schwartz, B et al. In the clinic: travel medicine. *Annals of Internal Medicine*. ITC6-16, 5 June 2012.

Spira, A. (2003) Preparing the traveler. *Lancet*, 361(9366), 1368-1381.

Print Text

Bugs, Bites, and Bowels: Travel Health (Cadogan Guides), Howarth, JW. Cadogan Books (UK), 2006

Control of Communicable Diseases Manual. Heymann, D, ed.

Epidemiology and Prevention of Vaccine-Preventable Diseases. ("Pink Book"). CDC, DHHS. To order:
<http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm>

Health Information for International Travel. ("Yellow Book"). CDC. Atlanta, GA: DHHS. To access online
and to order: www.cdc.gov/travel

Red Book: Report of the Committee on Infectious Diseases. Committee on Infectious Disease. American
Academy of Pediatrics. To order: <http://aapredbook.aappublications.org/> Online version is continuously
updated

Travel Medicine. Keystone, J et al. eds. Elsevier Science Health.

Vaccines. Plotkin, SA, Orenstein, WA, Offit, P, Edwards, K M. ed. Elsevier.

Auerbach's Wilderness Medicine. Auerbach PS, et al ed. Elsevier.

Internet Resources

*ACIP-Advisory Committee on Immunization Practices: updated CDC guidelines for vaccine
administration @ <http://www.cdc.gov/vaccines/recs/acip/default.htm>

ASTMH- American Society of Tropical Medicine and Hygiene: member directory, conference information
@ www.astmh.org

ATHNA- American Travel Health Nurses Association: policy and procedure project; online list of patient
resources; nursing standards, travel health education announcements and networking blog; annual NED
CE meeting @ www.athna.org; free accredited rabies and dengue learning modules

Australian Immunisation Handbook- excellent sections on vaccine administration available online @
<http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-home>

*CDC- Centers for Disease Control and Prevention: wealth of travel health resources including regional
health risks, outbreak information, disease fact sheets, updates and all aspects of immunization
information with ACIP recommendations, VIS forms, information on shortages, training announcements,
travel apps, continuing education programs and links @ www.cdc.gov/travel

Heading Home Healthy- a destination research travel health program supported by Global EpiNet, Mass
General, and CDC @ www.headinghomehealthy.org

*Immunize.org- Immunization Action Coalition: nonprofit immunization education resource; provides
updated vaccine information; website includes FAQ's; VIS forms; online newsletters also available @
www.immunize.org

IDSA-Infectious Disease Society of America: provides online article outlining vaccination for the immunosuppressed guidelines from the perspective of the Society @ www.idsociety.org

ISTM- International Society of Travel Medicine: website offers organizational information; worldwide member clinic directory; information about conferences, courses, journal, and biannual congress as well as the Body of Knowledge examination; members are eligible to use the Listserve @ <http://www.istm.org>

ProMED Digest- (International Society for Infectious Diseases)- publishes world outbreak information. To order: www.promedmail.org

UK Travel Health Nursing Competencies- Royal College of Nursing publication that defines critical competencies for the practice of travel health nursing in the UK. Available @ <http://www.rcn.org.uk>

US State Department-information sheets on countries worldwide; travel warnings; lists travel medical assistance companies @ www.travel.state.gov

WHO-World Health Organization: @ www.who.int/ith

<http://www.janechiodini.co.uk> UK website maintained by a leading world expert on travel health nursing

Destination Search Support Subscriptions

Travelcare- the International SOS interactive database for international health and safety risks and recommendations @ www.travelcare.com

Travax- the Shoreland interactive database for international health and safety risks and recommendations @ www.shoreland.com

Tropimed- interactive travel health research database available as CD or Internet service in three languages @ www.tropimed.com

Additional Articles:

Angell SY, Cetron MS. Health disparities among travelers visiting friends and relatives abroad. *Ann Intern Med.* 2005 Jan 4; 142(1): 67-72.

Bacaner N, Stauffer B et al. Travel medicine considerations for North American immigrants visiting friends and relatives. *JAMA.* 2004 Jun 16; 291(23): 2856-64.

Bhadelia N, Klotman M, Caplivski D. The HIV-positive traveler. *Am J Med.* 2007 Jul;120(7):574-80.

Carroll ID, Williams DC. Pre-travel vaccination and medical prophylaxis in the pregnant traveler. *Travel Med Infect Dis*. 2008 Sept; 6(5): 259-75.

Chen, L et al. Illness in Long-term Travelers Visiting GeoSentinel Clinics, *EID* 2009; 15: 1773

Freedman D et al. Geosentinel Surveillance Network. Spectrum of disease and relation to place of exposure among ill returned travelers. *N Engl J Med*. 2006 Jan 12; 354(2): 119-30.

Leder K et al. Illness in Travelers Visiting Friends and Relatives: A Review of the GeoSentinel Network, *CID* 2006; 43: 1185-93

Miller LC. International adoption: infectious disease issues. *Clin Infect Dis*. 2005 Jan 15; 40(2): 286-293.

Ryan ET, Wilson ME, Kain KC. Illness after international travel. *N Engl J Med*. 2002 Aug 15; 347(7): 505-516.

Roggelin L, Cramer JP. Malaria prevention in the pregnant traveller: a review. *Travel Med Infect Dis*. 2014 May-Jun; 12(3):229-36.

Toovey S et al. Special infectious disease risks of expatriates and long-term travelers in tropical countries. Part 1: malaria. *J Travel Med*. 2007 Jan-Feb; 14(1): 42-49.

Wilder-Smith A and Schwartz E. Dengue in travelers. *New Engl J Med*. 2005 Sept 1; 353(9):924-932.

And More Articles of Note:

Travel medicine considerations for North American immigrants visiting friends and relatives. Bacaner N, et al. *JAMA*. 2004 Jun 16; 291(23):2856-64.

Have Insulin, Will Fly: Diabetes Management During Air Travel and Time Zone Adjustment Strategies. M Chandran, MD and S V. Edelman, MD. *Clinical Diabetes* April 2003 vol. 21 no. 2 82-85

Keeping older patients healthy and safe as they travel. Schlaudecker JD, Moushey EN, Schlaudecker EP. *J Fam Pract*. 2013Jan; 62(1):16-23

Expert Rev Vaccines. 2013 Apr;12(4):453-66 Business travelers: vaccination considerations for this population. Chen LH, et al.

Sun exposure behavior and protection: recommendations for travelers. Diaz JH, Nesbitt LT Jr. *J Travel Med*. 2013 Mar-Apr; 20(2):108-18. Epub 2012 Dec 4.

International travel patterns and travel risks of patients diagnosed with cancer. Mikati T, et al. *J Travel Med*. 2013 Mar-Apr; 20(2):71-7.

Gastroenterol Hepatol (N Y). 2016 Sep; 12(9):540-546. Vaccinating Patients with Inflammatory Bowel Disease. Reich J et al.

Ann Intern Med. 2016 Nov 22. Travel-Associated Zika Virus Disease Acquired in the Americas through February 2016: A GeoSentinel Analysis. Hamer DH et al. GeoSentinel Surveillance Network.

A questionnaire study of Voluntary Service Overseas (VSO) volunteers: health risk and problems encountered. Bhatta P, et al.. J Travel Med. 2009 Sep-Oct; 16(5):332-7

Clin Risk Manag. 2015; 11: 217–228. Published online 2015 Feb 12. Travel advice for the immunocompromised traveler: prophylaxis, vaccination, and other preventive measures Rupa R Patel, et al.

Mayo Clin Proc. 2013 Nov;88(11):1231-40.. Epub 2013 Oct 8. International travel by persons with medical comorbidities: understanding risks and providing advice. Hochberg NS, Barnett ED, Chen LH, Wilson ME, et al.

Travel clinic consultation and risk assessment. Noble LM, et al. Infect Dis Clin North Am. 2012 Sep; 26(3):575-93. Review

Global TravEpiNet: a national consortium of clinics providing care to international travelers--analysis of demographic characteristics, travel destinations, and pretravel healthcare of high-risk US international travelers, 2009-2011. LaRocque RC, Rao SR, Lee J, Ansdell V, Yates JA, Schwartz BS, et al. Clin Infect Dis. 2012 Feb 15;54(4):455-62.

Post-Travel

Thwaites, GE, & Day, NP (2017). Review article: Approach to fever in the returning traveler. NEJM, 376; 6:548-60.

Sanford CA, Fung C. (2016), Illness in the Returned International Traveler. Medical Clinics of North America, Mar; 100(2):393-409.

Up to Date, Evaluation of fever in the returning traveler, Author: Mary Elizabeth Wilson, MD Section Editor: Karin Leder, MBBS, FRACP, PhD, MPH, DTMH Deputy Editor: Elinor L Baron, MD, DTMH, <https://www.uptodate.com/contents/evaluation-of-fever-in-the-returning-traveler>

Online Dengue Clinical Case Management Course (CDC), <https://www.train.org/cdctrain/course/1062677/>

Bastaki, H., Carter, J., Marston, L., Cassell, J., & Rait, G. (2018). Time delays in the diagnosis and treatment of malaria in non-endemic countries: A systematic review. *Travel Medicine and Infectious Disease*, 21, 21-27.

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Vasievich, MP, Villarreal, JD, & Tomecki, KJ (2016). Got the travel bug? A review of common infections, infestations, bites, and stings among returning travelers. *Am J Clin Dermatol*, 17:5. P451-462.

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