**ATHNA Travel Health Nursing**

***Model Core Curriculum***

**2018- 2019**

 ATHNA has created this model curriculum to help guide the professional development of registered nurses entering the specialty of travel health nursing and to shape educational programs in travel health nursing. It is designed to raise the standard of travel health nursing practice to achieve greater professional uniformity as well as better protection for the traveler. Travel health is a dynamic field and this curriculum will continue to evolve as the specialty advances and the health and safety needs of travelers change.

 The curriculum is comprised of the knowledge, skills, and attitudes recommended for the competent registered nurse 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 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,* 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 helped address that gap in nursing education. First developed in 2002, over the years this curriculum has served as a foundation for a number of short courses and CE activities offered by nurse experts, travel health companies (EHE, Concentra, Premise, Passport Health), 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. In 2019-2020 ATHNA will continue with its goal to share this curriculum more widely in an effort to inform and engage many more U.S. nurses in the care of travelers.

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

1. **Global Health and Travel in the 21st Century**

Globalization and Travel Health

Geographic Epidemiology / Global Distribution of Diseases and Health Hazards

International Travel 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, World Tourism Organization, Other key stakeholders

1. **Defining the Specialty**

As per *Travel Health Nursing: Scope & Standards of Practice, 3rd edition (2019)* and

*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 Health

 Military

 Government and International Organizations

 Other

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 Organizations for Travel Health Nurses: ATHNA, Interest Groups of ACHA, others

International Perspective-International Society of Travel Medicine, RCN, NECTM, SASTM, others

Research Activities and Opportunities in the Specialty

1. **Health and Safety Risks of Travel**

**A. Introduction: The True Risks of Travel**

Defining Travel Risk

GeoSentinel and CDC 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

Others: see CDC and ISTM Body of Knowledge Listings

**D. Infections by Ingestion**

Traveler’s Diarrhea

Hepatitis A

Hepatitis E

Typhoid fever

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

**E. Infections by Personal Contact**

Measles

Hepatitis B and C

HIV

STI’s

Varicella

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, oceans 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

1. **Travel Health Nursing Service Delivery**

Overview

Per *Travel Health Nursing: Scope and Standards of Practice, 3rd edition:*

 Pre-Travel Services

 Post-Travel Services

 In-transit Services

Administrative and Educational Services

**A.Pre-Travel**

Goals of the encounter

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

Systematic Assessment of Traveler: health history, age, gender, allergies and medications, 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 (Chapter V)
* Health Counseling (Chapter 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

1. **Travel Vaccinations and Vaccine Administration**

Principles of Vaccinology

The 3 R’s: Routine, Recommended and Required Vaccines

Adult Vaccinations (list of U.S.)

Pediatric Vaccinations (list of U.S.)

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 (list of vaccines)

Regulations and Legal Issues

Documentation: Federal, Institutional and CDC guidelines (ICVP)

Resources for Professionals and Travelers

1. **Travel Health Medications for Prophylaxis and Self-treatment**

Medications for travel: Malaria, Acute Mountain Sickness, Traveler’s Diarrhea, Jet Lag, Motion Sickness, Leptospirosis

Traveling with medications/ obtaining medications abroad

Travel medical kit

Regulations and Legal Issues

1. **Prevention Counseling**

Principles of Health Counseling

Risk Perception, Risk Reduction: Effective Messaging Techniques

 Exacerbation of acute or chronic health issues

 Use of travel medications

 Food and Water /Water disinfection

 Motor Vehicle Accidents

 Personal Safety and Security

 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

Government and non-governmental 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, databases, financials, marketing

Practitioner knowledge, understanding, skills, and attitude

Policies and Procedures, Standing orders

Communication with patients: telephone, email, text, other

Clinic Documentation

Regulations and Legal Issues

Telehealth

Resources and Tools for the Clinic

Providing care to the traveler with limited resources of time or funds

**IX. Travel Issues for Special Populations**

What are special populations?

Assessing for fitness-to-travel and accommodation

Infants and Children

Seniors

Women

LGBQT

Persons with co-morbidities: acute illness, chronic illness, disabilities

Allergies

Immunosuppression including HIV

Pregnancy

VFR

Last Minute Travelers

Ex-pats and Long-stay travelers

Cruises

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

Others: 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**

Obligation in a dynamic field

Online resources: Courses and Conferences

International options

**XIII. Future Trends**

**Resources for the Curriculum**

***Travel Health Nursing: Scope and Standards of Practice*, 3rd edition (2019)**

**Glossary of Travel Health Nursing Terminology (ATHNA website** [**www.athna.org**](http://www.athna.org)**)**

**CDC Infectious Diseases Related to Travel (CDC Yellow Book 2018, Chapter 3,** [**www.cdc.gov/travel**](http://www.cdc.gov/travel)**)**

**ISTM Body of Knowledge (**[**www.istm.org**](http://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. 20th ed. Heymann, D, ed. APHA 2014.

Epidemiology and Prevention of Vaccine-Preventable Diseases. (“Pink Book”) 13th ed revised. CDC, DHHS, 2015. To order: http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm

Health Information for International Travel 2020 (“Yellow Book”). CDC. Atlanta, GA: DHHS, 2017. 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

The Travel and Tropical Medicine Manual, 5th Edition, Christopher A. Sanford, Elaine C. Jong, and Paul S. Pottinger,eds. Elsevier, 2017

The Vaccine Handbook: A practical guide for clinicians, 5th ed. G. Marshall. Professional Communications, Inc. 2015. http://www.immunize.org/vaccine-handbook/

Travel Medicine. Keystone, J et al. eds., 4th ed. Elsevier Science Health, 2018.

Travelers’ Vaccines. Jong E and Zuckerman J eds. BC Decker, 2010

Vaccines, 7th ed. Plotkin, SA, Orenstein, WA, Offit, P, Edwards,K M. ed. Elsevier, 2018.

Wilderness Medicine. 7th ed. Auerbach PS, et al ed. Elsevier, 2017

**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; free annual NED CE meeting @ www.athna.org

Australian Immunisation Handbook- excellent sections on vaccine administration 10th edition (2016) 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

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

IAMAT-International Association for Medical Assistance to Travellers: directory of English-speaking physicians and clinics worldwide @ www.iamat.org

IDSA-Infectious Disease Society of America: provides online article outlining vaccination for the immunosupressed 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

KidsTravDoc- regularly updated web site maintained by Karl Neumann, MD, a pediatrician who specializes in travel medicine. Very user friendly for both providers and patients @ http://kidstraveldoc.com/wordpress/children-vacations-update/

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

www.pregnanttraveler. com- website full of information about travel issues and pregnancy; maintained by Dale Carroll, MD a specialist in Ob/Gyn and travel medicine

UK Travel Health Nursing Competencies- Royal College of Nursing publication that defines critical competencies for the practice of travel health nursing in the UK, 2007. 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: includes the Green Book-International Travel and Health and outbreak information, including SARS and Avian Flu updates @ www.who.int/ith

http://www.janechiodini.co.uk/ UK website maintained by a leading world expert on travel health nursing; good rabies tutorial

**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. Geosentienl 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.

van Eekeren, L.,E., de Vries, S.,G., Wagenaar, J. F. P., Spijker, R., Grobusch, M. P., & Goorhuis, A. (2018). Under-diagnosis of rickettsial disease in clinical practice: A systematic review. Travel Medicine and Infectious Disease, 26, 7-15.

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.

Ratnam, I, Leder, K, Black, J & Torresi, J. (2013). Review article: Dengue fever and international travel. JTM; 20; 6. P384-393. .

Leder K, Torresi J, Libman MD, Cramer JP, Castelli F, Schlagenhauf P, et al. GeoSentinel Surveillance of Illness in Returned Travelers, 2007–2011. Ann Intern Med.; 158:456–468.

Martinez JD, Garza JAC, Cuellar-Barboza A., Going Viral 2019: Zika, Chikungunya, and Dengue, Dermatol Clin. 2019 Jan; 37(1):95-105.

*Curriculum last reviewed by ATHNA Expert Panel September 2017; Travel Health Nursing: Scope and Standards of Practice, 3rd edition (2019) added June 2019*