

# Introduction

## Scope and Standards of Travel Health Nursing

The American Travel Health Nurses Association (ATHNA) is the specialty nursing organization for travel health nurses in the United States. ATHNA establishes, maintains, and promotes the standards for professional travel health nursing practice.

## Definitions

*Travel health nursing is the specialized nursing practice that advances the well-being of all travelers in all phases/stages of travel and in all settings.* This specialty focuses on the health and safety of travelers through continuous surveillance and assessment of the multiple determinants of health with the intent to promote health and wellness; and prevent disease, disability, and premature death. Travel health nursing is a highly complex nursing specialty that draws on knowledge from nursing, pharmacology, epidemiology, tropical medicine, primary care, and behavioral psychology to provide evidence-based interventions that ensure the health and safety of travelers and the communities they impact.

Travel health nursing professionals represent the myriad of specially educated and trained registered nurses, advanced practice registered nurses, and graduate-level prepared travel health nurses who exercise the expert nursing process skills of assessing patients, analyzing subjective and objective data pertinent to travel, educating patients about travel-related health risks and safety concerns, as well as teaching health promotion and illness avoidance. The methods of this specialty are evidence-based and in accordance with professional and ethical standards. Travel health nurses practice within the scope of their state nurse practice acts and the standards of the specialty. They function as direct care providers and consultants to businesses, organizations, and the traveling public. Travel health nurses are researchers, faculty members, and nursing leaders. Many are entrepreneurs, serving as owners and operators of their own travel health centers.

The American Nurses Association (ANA) document, *Nursing: Scope and Standards of Practice, 3rd Edition* (ANA, 2015b) defines the practice of professional nursing in the United States. It is the foundation for this publication ATHNA's and ANA's, *Travel Health Nursing: Scope and Standards of Practice, 1st Edition*, (2021), which describes the specialty of travel health nursing. This scope of practice statement provides a comprehensive description of travel health nursing: the what, when, where, who, how, and why of the specialty practice. The standards guide the practice of travel health nurses and the quality nursing care of travelers. The standards serve to maintain safe and competent clinical and administrative practice as travel health nursing roles and responsibilities evolve.

Travel health nursing is a dynamic and evolving specialty, and this publication updates ATHNA's *Travel Health Nursing: Scope and Standards of Practice II* (self-published 2014). It includes an expanded scope of practice statement and 17 standards with competencies for the professional practice of travel health nursing in an increasingly "complex global healthcare environment" (Hill 2016). The standards for travel health nursing are intentionally general and broad to encompass the expanding responsibilities of travel health nurses. The accompanying competencies explain how the standards apply to general travel health nursing practice and, therefore, may be modified for a specific travel health nursing population or setting.

**The purpose of this publication is to:**

1. Provide concrete information for travel health nurses, other health professionals, and the public about what constitutes travel health nursing practice provided by registered nurses, advance practice registered nurses and graduate-level prepared travel health nurses.
2. Promote and guide the delivery of pre- and post-travel quality nursing care for individuals, families, and groups in diverse outpatient settings (e.g., policies, procedures, and competencies).
3. Raise standards of practice and achieve greater uniformity in the provision of travel health nursing services to better protect travelers.
4. Facilitate the development and dissemination of professional nursing knowledge in travel health in the undergraduate, graduate, and continuing education (CE) environments.
5. Serve as a resource to travel health nurses and their employers for job descriptions, orientation manuals, ongoing training, and professional promotion.
6. Facilitate the evaluation of professional travel health nursing performance as evidenced in performance appraisals, peer reviews, and reflective practice.

7. Serve as a reference for the scope and performance standards of travel health nursing for use by governments and the legal system.
8. Promote participation in travel health nursing research and evidence-based practice.
9. Guide performance improvement initiatives in clinical and organizational environments.
10. Guide and promote ethical practice.
11. Serve as a vehicle to advance the specialty of travel health nursing and improve health outcomes for travelers and the communities to which they travel and return.

## **History of Travel Health Nursing Standards**

The concept that specific travel health nursing standards were needed started sometime in the 1990s. Nurses in the United States had been directed by employers to provide care to travelers for more than 10 years. All too often, however, nurses were asked to provide pre-travel services based solely on their experience of providing allergy injections or routine immunizations; nurses were rarely afforded any specialized education or training to address the varied health issues related to travel. Indeed, it was not uncommon for a nurse working in a corporate or college health setting to be expected to prepare international travelers in a brief encounter that was simply added to the clinic schedule with little or no prior notice. Safety and security information for the destination were not routinely addressed. The many needs of travelers beyond immunization services were rarely recognized.

The necessity for nursing standards was also raised as a frequent topic for discussion whenever travel health nurses around the country engaged in networking and professional development. Travel health nurses voiced valid concerns about inconsistencies in the delivery of pre- and post-travel nursing care; they also raised questions about patient safety, undue influence of pharmaceutical representatives, potential conflicts of interest in for-profit settings, and the lack of training opportunities in travel health.

At about the same time, travel health nurses at the Royal College of Nursing (RCN) in the United Kingdom started to develop a set of competencies for travel health nurses in their country; they too, saw the need for travelers to receive quality services that went beyond the delivery of vaccinations. U.S. nurses learned about the RCN initiative at international conferences and then established communications with nursing principals that included Jane Chiodini and Sandra Grieves. Additionally, nurses learned about the travel health course offered by the Faculty of Travel Medicine

at the Royal College of Physicians and Surgeons of Glasgow. Subsequently, U.S. travel health nurses learned of additional professional efforts in the Netherlands.

In 2004, when ATHNA was incorporated, the initial goal was to document the scope and standards of travel health nursing. This effort was seen as a fundamental and necessary step to both define the specialty and help ensure safe and consistent pre- and post-travel nursing care for travelers. That first self-published version was modeled on the ANA *Nursing: Scope and Standards of Practice* with additional attention paid to the published work of travel health nurses in the United Kingdom and the Netherlands, and publications of the Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), the Infectious Disease Society of America (IDSA), and the International Society of Travel Medicine (ISTM).

Starting in 2012, ATHNA initiated a working group to explore formal recognition of travel health nursing as a specialty. Toward that goal, in 2014, ATHNA revised its *Travel Health Nursing: Scope and Standards of Practice I* (self-published 2004), again using the model of the latest ANA scope and standards edition. That second edition of ATHNA's *Travel Health Nursing: Scope and Standards of Practice, II* (self-published 2014) included competencies for each of the standards and descriptions of the various professional nursing roles. In 2017, ATHNA made ANA recognition of travel health nursing as an official nursing specialty its number one organizational priority. As part of that effort, this edition of the *Travel Health Nursing: Scope and Standards of Practice, 1st Edition (2021)* was developed in accordance with the 2015 requirements of ANA. This latest edition includes an expanded scope of practice statement to more fully document the travel health nursing specialty as well as expanded competencies. In addition, ATHNA created an application of the provisions of ANA's *Code of Ethics for Nurses with Interpretive Statements* for travel health nurses, *Application of Code of Ethics Provisions by Travel Health Nurses*.

## **Scope of Travel Health Nursing: The What, When, Where, Who, How, and Why**

The scope of a nursing specialty defines the specialty and describes what it involves, where it is practiced, who provides the care, and the how and why of specialty practice.

## **Scope of Travel Health Nursing: The WHAT**

As previously mentioned, travel health nursing focuses on the health and safety of all travelers through continuous surveillance and assessment of the multiple determinants of health with the intent to promote health and

wellness; and prevent disease, disability, and premature death. It is a highly complex nursing specialty that draws on knowledge from nursing, pharmacology, epidemiology, tropical medicine, primary care and behavioral psychology to provide evidence-based interventions that contribute to the health and safety of domestic and international travelers and the communities they impact.

### **Objectives of Travel Health Nursing**

- The travel health nurse uses the nursing process to promote the health and safety of travelers, the destinations to which they travel, and the communities to which they return.
- The travel health nurse assesses subjective and objective data obtained from the patient, as well as authoritative national and international travel health resources to structure an outpatient encounter focusing on illness prevention and health promotion, including safety and security information for the traveler. The goal is to prepare travelers to achieve a healthy and safe trip that meets their personal goals.
- The travel health nurse individualizes patient care in the context of caring, compassion, and sensitivity to multiple traveler and trip factors: age, gender, ethnicity, culture, health status, previous travel history, reason for travel, finances, length of trip, planned events during the trip, and time before departure.
- The travel health nurse customizes patient care utilizing the most up-to-date national and international global health and safety risk data. Travel risks may include vaccine-preventable and non-vaccine-preventable infectious diseases, seasonal, climate, and altitude risks, food- and water-borne illnesses, transportation accidents, activity risks (e.g., fresh water swimming, spelunking, ocean sports, mountaineering, etc.), sexually transmitted infections (STIs), social unrest, crime, disease outbreaks, and access to, and quality of, medical and safety services. The travel health nurse incorporates the teach-back method with the traveler to verbalize how these risks are to be managed while abroad in order to evaluate how well the education was received.
- The travel health nurse performs a comprehensive health and safety risk assessment customized to the traveler and itinerary, utilizing appropriate reliable resources (CDC, WHO, etc.) to develop and implement an evidence-based nursing plan of risk reduction using pharmaceutical and nonpharmaceutical interventions, and

evaluates outcomes for travelers, their destination(s), and their home community.

- The travel health nurse triages the ill or injured post-travel patient with special attention to the serious, treatable, and transmissible. If a transmissible illness is identified, the travel health nurse will notify the proper authorities and take action to protect the local community and traveler as indicated.
- The travel health nurse participates in ongoing education, research, and advocacy to implement/translate learning to actions in order to achieve continuous improvements in the 1) pre- and post-travel care of travelers, 2) global coordination and implementation of health and safety measures that benefit all populations, and 3) advancement of the practice of travel health nursing.

### **Travel Health Nursing Encounters**

Nurses in this specialty provide services in three different clinical encounters: pre-travel, during travel (“in-transit”), and post-travel. In addition, travel health nurses can provide a variety of administrative and educational nursing services, such as seminars for healthcare personnel and groups of travelers, and consultations to organizations and providers who have questions about a challenging travel encounter.

#### ***Pre-Travel Encounters***

Travel health nurses provide direct nursing care in a variety of outpatient settings and by tele-health and electronic messaging. Travel health nurses provide pre-travel care visits to individuals, families, and groups. The clinical encounter is episodic and time-limited. While a single visit is common, multiple visits for a particular trip or multiple itineraries may be required either to complete the assessment, and/or an immunization series or for extended health counseling. Additionally, travel health nurses provide expert consultation encounters to promote travel-related health and safety of groups and organizations. Moreover, they are indispensable speakers to audiences new to the idea of international travel, as the expertise of travel health nurses is freely shared regarding the benefits of seeing our nation and the world, as well as current requirements and recommendations for vaccine-preventable diseases with practical advice regarding self-care in order to optimize health and safety while on a journey.

Most travelers initiate the travel health nursing clinical encounter as they prepare for international or domestic travel; alternatively, some travelers are directed to travel health nursing care by employers, school authorities, tour managers, the military, and others. The assessment phase of the encounter encompasses a largely self-reported traveler health history. Next, health and

safety risks for a given itinerary (destination and activity risks) are identified using sophisticated internet-based search engines. At the heart of the assessment is a complex risk analysis, considering both the likelihood as well as the consequences of specific health and safety occurrences. Risk factors related to the traveler include age, possibility of pregnancy, allergies, chronic illness, unstable medical and psychiatric conditions, previous immunizations, previous travel-related illnesses and medications. Additional risks include: risk-taking tendencies as they relate to sexual behavior, drug use and extreme sports, travel health insurance coverage, travel motivation, concerns, attitudes, country restrictions, and status as an immigrant or refugee or “Visiting Friends and Relatives” (VFR) traveler. Risk factors related to the trip include destination(s), departure dates, specific order of countries to be visited, duration in each country (especially greater than one month), season, climate, and altitude at destinations, type of accommodations, trip purpose, specific activities, and modes of transportation.

International and domestic travel expands every year in terms of numbers, destinations, and reasons for travel. Increasingly, travel health nurses are called upon to provide individualized care to travelers who are making trips that go beyond typical vacation, employee, and VFR travel. Pre-travel encounters include care for unaccompanied minors, expats, flexpats, medical and dental tourists, romance tourists, ecotourists, students (school and college), researchers, missionaries, babymooners, voluntourists, military and emergency responders. They also include care for pilgrims, specialty tourists: food, spa, adventure, history, LGBTQ+, solo, and single parent, space traveler, green traveler, cruise traveler, war zone traveler, bucket list travelers, disaster response workers and volunteers, sex tourists, persons adopting internationally, intergenerational tourists, remote travelers, immigrants, and refugees. As more travelers seek medical or dental care internationally, the expectation that a traveler is “in good health” is no longer valid. To add to this concern are travelers with special needs and who require assistive devices, are oxygen dependent, have a companion animal, or need syringes or other specialized equipment and supplies to manage illnesses, such as diabetes, psoriatic arthritis, or bleeding disorders.

Travel health nurses can also expect to prepare travelers with a wide range of physical and mental health issues that can include chronic physical illness (e.g., COPD, CHF, DM, RA, severe allergies, severe motion sickness, asplenia) and mild to severe psychological conditions (e.g., OCD, ADHD, panic attacks, depression, bipolar disorder, eating disorders, addictions, flying phobias). Travel health nurses will also prepare individuals who are pregnant or trying to conceive, post-surgical patients, persons with immunosuppressive conditions and therapies, travelers with new diagnoses currently being investigated, conditions requiring the use of medications either not available internationally or



outlawed at the destination, and medical or dental issues that will be addressed with services in another country.

During the implementation phase of the encounter, the travel health nurse provides pharmaceutical interventions (immunizations, medications within state scope of nursing practice guidelines) and nonpharmaceutical interventions (health counseling, coordination of care with other health providers, referrals for additional evaluation, and care and guidance for post-trip health management). A typical visit may include the administration of routine vaccinations (including any necessary catch-up doses or boosters) and vaccines that are recommended or required for travel as well as customized counseling to prevent traveler's diarrhea, vector-borne infections that include malaria, *Aedes* illnesses (e.g., dengue, Zika, yellow fever), and rabies, STIs, motor vehicle accidents, airline hazards (e.g., deep vein thrombosis [DVT], jet lag, respiratory infections), climate hazards, and fresh water-related illnesses.

Many travelers will require a review of their routine medications, as well as guidance for the use of drugs indicated for certain travel-related risks (altitude illness, traveler's diarrhea, malaria) and recommendations for the assembly of a personalized travel medical kit. Travelers with pre-existing conditions will receive self-care management counseling and education about medical services and access abroad. Travel health nurses will document the encounter in the health record and also complete any necessary medical documents required by a government (e.g. visa application), or a tour company, employer, camp, school, or college. They will issue the *International Certificate of Vaccination or Prophylaxis* (ICVP) card, if a required vaccine is administered, provide a waiver if yellow fever vaccine is medically contraindicated, and provide medical letters that travelers may need or want to carry on the trip (e.g., explaining a chronic condition or the use of an injectable medication). The travel health nurse may also assist in the translation of these documents into the primary language of the destination.

Every traveler during the pre-travel encounter receives guidance about post-travel care that may include a timeline for additional vaccine doses or boosters, urgent follow-up for febrile illness, the need to complete a malaria medication schedule, post-trip behaviors after travel to Zika regions (pregnancy avoidance, use of repellents), and recognition of signs and symptoms that warrant medical attention upon return. Travelers are also reminded that they could return home with infections that necessitate rapid attention to prevent community spread. Time spent in the pre-travel encounter is valuable for assessing adverse vaccine reactions and providing instantaneous management of same. The encounter also offers the traveler role play and teach-back opportunities of common health issues encountered during travel to confirm traveler knowledge of counseling content and correct responses. As travelers with more complex needs are cared for during the pre-travel



encounter, the scope and complexity of travel health nursing practice has broadened and increased. This can be especially true of travelers who are older, pregnant, foreign-borne, or with comorbidities related to chronic disease and disability.

Travel health nurses with prescriptive authority will also prescribe travel medications during the pre-travel encounter that may include, but are not limited to, therapies for altitude illness, malaria, traveler's diarrhea, skin infections, respiratory infections, chronic illnesses such as asthma or diabetes, severe allergic reactions, contraception, UTIs, and musculoskeletal injuries.

### ***In-Transit Encounters***

With advances in communication technology, travel health nurses may be called upon to offer patient counseling, arrange for referrals, or order prescriptions for travelers in transit almost anywhere in the world. For example, patients may call to say that their malaria medication is causing problematic side effects, and they want a referral to a destination clinic for a replacement drug. Assistance with evacuation from Israel for a traveler with an acute case of "Jerusalem Syndrome" (psychotic episode with associated religious obsessions or delusions) would be another example. In addition to these at-a-distance contacts, travel health nurses can travel with a group and serve as the designated, on-site health care provider. As a result of in-transit encounters and on-the-scene travel encounters, the travel health nurse may recommend changes to site pre-travel and post-travel policies and procedures, as well as suggestions for travel medical kits and staff training.

### ***Post-Travel Encounters***

In post-travel encounters, travel health nurses will, in accordance with the parameters of their state nursing scope of practice and institutional policies, provide triage, health evaluation, medical and nursing diagnosis, and management of health problems encountered during a journey. These problems may include trauma, routine illness, infections, and tropical or more exotic emerging diseases. The travel health nurse providing post-travel care focuses on the infectious versus the non-infectious, and proceeds to evaluate and manage the serious, treatable, and transmissible based on his or her level of training and practice in accordance with site protocols, referring as appropriate. The goal is to treat the patient, while preventing transmission to others and reporting to institutional and public health authorities as appropriate.

During the assessment phase of a post-travel encounter, the travel health nurse must answer some initial critical questions: Is there a risk to self? Is there a risk to others? How much time is available? The process is quite complicated as many illnesses present in a similar fashion with flu-like symptoms.

Life-threatening illnesses can initially appear benign, and the differential diagnosis can be quite large. Since an illness like *Plasmodium falciparum* malaria can be fatal very quickly, timely intervention is critical.

The first step is to determine what personal protective equipment is needed and if isolation is necessary. A thorough history is essential. The travel health nurse will ask the traveler about signs and symptoms of illness, as well as dates of onset, and then collect information on a number of variables that can contribute to trip-related illness, including, but not limited to, all geographic destinations and associated dates, routine and travel immunizations, seasonal and cultural factors, food, water, and insect precautions, accommodations, ectoparasites, modes of travel, local contacts, compliance with personal protective measures (PPM) and medications. Additional trip variables include any animal contacts, freshwater exposure, medical or dental care abroad, trip purpose and activities, number of new sexual partners, consumption of reef fish, unpasteurized dairy products or bush meat, and outbreaks. The travel health nurse will make the necessary referrals for further evaluation. If the ill traveler is a member of a group or organization, the travel health nurse will take additional actions to provide surveillance and evaluate other members of the group as warranted. In the event of communicable disease risk, the travel health nurse will take measures to ensure the safety of other patients and staff and notify the appropriate public health officials immediately.

A travel health Advanced Practice Registered Nurse (APRN) with additional training in post-travel care creates a differential of diagnoses utilizing the traveler's health history, itinerary, and up-to-date information about global health. The travel health nurse will then determine if the patient's complaints are related to travel exposures, unrelated to exposures during the recent trip, or because of past travel or previously forgotten trips. Based on the likelihood of specific illnesses, and taking into account incubation periods and exposure times, the travel health nurse determines any appropriate diagnostic testing.

The travel health APRN implements appropriate treatment measures, including medical therapies and health education. In some circumstances, the travel health nurse recognizes the need to initiate treatment based on history and clinical findings before definitive lab results are available (e.g., malaria or serious rickettsial infections). The travel health nurse refers to other specialists as indicated and provides follow-up as appropriate. Finally, the travel health nurse makes recommendations for future screening for asymptomatic conditions (e.g., schistosomiasis, strongyloides, filariasis, Chagas disease, COVID-19). As a result of this encounter, the travel health nurse may recommend changes to site prevention policies and protocols and staff training.

## **Administrative and Educational Roles**

In addition to clinical encounters, travel health nurses are often called upon to provide consultation services, utilizing their assessment, risk reduction, and analytical skills to advise groups and organizations pre- or post-travel (see Figure 1. Process of Travel Health Nursing). Employers, tour companies, colleges, non-government organizations (NGOs), governments, and other entities (e.g., missionary, adoption, and refugee assistance groups) will seek travel health nursing assessments of potential hazards for a given itinerary and travel health nursing recommendations for primary and secondary prevention measures. For example, the travel health nurse may be asked to recommend appropriate accommodations for a corporate frequent flyer who is morbidly obese or a student with a seizure disorder joining a study abroad group. Travel health nurses may also be asked to identify and assess health care services abroad or confirm the availability of, and sources for, medical equipment (e.g., wheelchairs, oxygen) at destinations. Travel health nurses provide group presentations as part of these consultations and develop relevant policies, standing orders, web content, and CE programs for nurses, physicians, public health officials, and pharmacists and educational materials, such as articles, brochures, and posters for health professionals and the public.

During the pre- and post-travel clinical encounters, travel health nurses actively seek opportunities to improve the care of individuals and family travelers. In an administrative or educational capacity, travel health nurses seek to improve the care of, and outcomes for, travel populations (e.g., employees, students, seniors, immigrants, and refugees). Many travel health clinics in the United States are managed by travel health nurses, utilizing nursing protocols established by travel health nurses. Throughout the United States, travel health nurses engage with local and national stakeholders to maximize the health and safety of travelers and minimize the impact of travel risks on communities here and abroad.

## **Scope of Travel Health Nursing: The WHEN**

Travel health nurses provide care to travelers at any stage of their journey. They most frequently interact with travelers during pre-travel encounters for trip preparation and during post-travel encounters for triage, evaluation, and management of travel-related injury or illness. In addition, individuals, groups, and organizations often engage travel health nurses in the trip planning process to identify and reduce itinerary health and safety risks. During an outbreak or its aftermath, the travel health nurse may also function as part of the response and evaluation team. Travel health nurses routinely design and deliver travel health curricula and educational programs to varied professional groups including nursing, medicine, public health, pharmacy and veterinary

| Risk Assessment: Traveler  | RISK ASSESSMENT: TRIP   |
|--|---|
| <ul style="list-style-type: none"> <li>• Experience</li> <li>• Age</li> <li>• Possibility of pregnancy</li> <li>• Chronic illness</li> <li>• Differently abled</li> <li>• Unstable medical/psychiatric condition</li> <li>• Allergies</li> <li>• Risk-taking tendencies-sex, drugs, and extreme sports</li> <li>• Health insurance</li> <li>• Previous immunizations</li> <li>• LGBTQ</li> <li>• Immunocompromised</li> <li>• Travel motivation, concerns, and attitudes</li> <li>• Medications-country restrictions</li> <li>• Those visiting friends and relatives in their countries of origin</li> </ul> | <ul style="list-style-type: none"> <li>• Destination (armed conflict zones, arctic, remote, etc.)</li> <li>• Departure date</li> <li>• Specific order of countries to be visited</li> <li>• Duration in each country (esp. &gt; 1 month)</li> <li>• Seasons at destination (monsoons, typhoons, etc.?)</li> <li>• Type of accommodations (camping, hostels, windows/ac, etc.)</li> <li>• Activities (spelunking, diving, extreme sports, high altitude)</li> <li>• Purpose (research, study, missionary, journalism, athlete, adoption, medical tourism)</li> <li>• Modes of transportation</li> <li>• Mass gatherings (Haji/Umrah/Kumbh Mela, etc.)</li> </ul> |

| RISK ANALYSIS: OUTCOMES VARY WITH SPECIFICS |   |   | PRE-TRAVEL PREPARATION  |
|---|---|---|---|
|   | Consequences Low                                | Consequences Catastrophic                                   | <ul style="list-style-type: none"> <li>• Risk assessment               <ul style="list-style-type: none"> <li>• Traveler</li> <li>• Trip</li> </ul> </li> <li>• Designing a customized plan               <ul style="list-style-type: none"> <li>• Counseling</li> <li>• Immunizations</li> <li>• Medications</li> <li>• Referrals</li> </ul> </li> </ul> |
| Likelihood Low                              | Most chikungunya                                | Malaria<br>Rabies<br>Typhoid fever<br>Hemorrhagic<br>Dengue |   |
| Likelihood High                             | Traveler's Diarrhea<br>Most dengue<br>Most zika | Malaria<br>Rabies<br>Typhoid fever                          |   |

| POST-TRAVEL CARE  | RELIABLE RESOURCES   |
|---|--|
| <ul style="list-style-type: none"> <li>• Establish differential diagnosis</li> <li>• Perform appropriate diagnostic tests</li> <li>• Recommend appropriate treatments and follow-up</li> <li>• Notify any appropriate public health officials as indicated</li> </ul> | <ul style="list-style-type: none"> <li>• Centers for Disease Control</li> <li>• Subscription services such as Travax, TravelCare</li> <li>• ProMED-mail</li> <li>• Immunization Action Coalition</li> <li>• International Association for Medical Assistance to Travelers</li> <li>• Gideon Database</li> <li>• World Health Organization</li> </ul> |

**Figure 1.** Process of Travel Health Nursing.

medicine, as well as lay audiences. At any time, travel health nurses may be called upon by clinics, institutions, communities, and governments to develop policies and procedures that promote the health and safety of travelers and their destinations. Travel health nurses actively participate in clinical services that receive and care for immigrants and refugees as well. Travel health nurses provide tele-health services to travelers in transit and also serve as accompanying healthcare providers on group trips, such as treks and safaris. Travel health nurses are actively involved in travel health research and writing for peer and lay publications on diverse travel-related health topics (e.g., repellent choices, Zika, transporting medications abroad). They manage clinical travel health services and serve in leadership roles in professional organizations, academic settings, and governmental groups. The scope of travel health nursing encompasses the full range of roles, functions, responsibilities, and activities the travel health nurse has the authority to perform when the patient is a traveler or a health or safety issue involves travel to any destination, domestic or international. Travel health nursing is the specialized nursing practice that advances the well-being of travelers to all destinations, in all phases/stages of travel, and in all settings.

## **Scope of Travel Health Nursing: The WHERE**

### **Travel Health Nursing Practice Sites**

Travel health nurses provide clinical services to individuals, families, and groups in a variety of outpatient settings in the United States and abroad including:

- Hospital outpatient clinics
- Emergency rooms
- Group multispecialty practices
- Solo practices: internal medicine, family practice, pediatrics, ob-gyn, infectious disease
- Nurse-owned or managed practices
- Travel health clinics
- Tele-health call centers
- Pharmacies
- School health centers
- College health centers
- Occupational health units
- Public health departments

- Military bases
- Urgent care centers
- Visiting Nurse Associations
- Government offices (CIA, FBI, U.S. embassies, etc.)

Consumers can find travel health nurses for clinical services in a number of different ways. Corporate and government employees often find them at worksite clinics. Students, faculty, administration, and staff at colleges and universities locate their services at their institutions. County and public health organizations maintain listings of travel health nursing services available to the public. The VNA and the military offer travel health nursing services. CDC publishes a list of all travel health clinics that offer the yellow fever vaccine in the United States. HealthMap Vaccine Finder and the CDC Flu Vaccine Finder are two websites that direct travelers to travel health nursing resources in or near their zip code. Both the International Society of Travel Medicine (ISTM) and the International Association for Medical Assistance to Travellers (IAMAT) list travel health clinics around the world by country. In addition to these listings, other health professionals in a community, such as primary care providers and specialists, often refer their patients to travel health nurses for pre- and post-travel care.

In addition to the delivery of direct patient care services, travel health nurses function as consultants to businesses, religious and humanitarian organizations, educational institutions, and NGOs. They serve as faculty members at nursing, medicine, and public health schools as well as regional, national, and international professional conferences. They are researchers and nursing leaders, and some are entrepreneurs, serving as owners and operators of their own travel health centers.

## **Scope of Travel Health Nursing: The WHO Professional Nursing Designations**

Travel health nurses are licensed at all levels of nursing. While as yet there is no specific graduate degree in the specialty, many travel health nurses hold a variety of graduate degrees including nursing, public health, health education, and health administration (MS, MSN, MPH, MBA, PhD, and DNP). Travel health nurses provide clinical and consultative services in accordance with their state nurse practice acts and the standards of the specialty. Individual roles also vary with education, experience and institutional policies.

### ***Registered Nurse***

Across the United States in diverse practice settings, RNs provide the majority of pre-travel care to travelers. Functioning within their state nurse practice acts and



the standards of the specialty, they complete the pre-travel assessment of the traveler and the itinerary, identify health and safety risks of the journey, and establish with the traveler an individualized prevention plan that consists of immunizations, customized health education, and referrals as may be indicated. In many states utilizing standing orders, RNs will then proceed to vaccinate, counsel, and educate travelers about the myriad of non-vaccine-preventable risks of travel as well as travel medications ordered by prescribers in the clinical practice. RNs are also usually the first clinicians returning travelers will encounter. The RN will take a health history and triage the ill or injured traveler in accordance with practice protocols. RNs in travel health are especially alert to illness syndromes that may warrant quarantine and immediate referral for emergency care. In addition to these clinical responsibilities, RNs may function as practice managers, trainers, and members of global security, global health, emergency response, and related committees of universities, corporations, and governments. RNs contribute to travel health nursing data collection, research studies, travel health nursing guideline development, and both lay and professional publications. Individual roles also vary with education, experience, and institutional policies.

### ***Travel Health Nurses Prepared at the Graduate Level***

RNs prepared at the graduate level may assume all RN functions, augmenting the RN role within a greater range of formal training and greater authority to practice to the full extent of their education and licensure. They hold a variety of clinical and management positions. Clinical nurse specialists may serve as clinic managers and experts for orientation and training. Travel health nurses prepared at the graduate level serve as research investigators and serve on research review committees. They author professional publications (articles, chapters, texts) and also serve as peer reviewers and on journal editorial boards. In addition, these nurses may direct quality assurance efforts and oversee the development of policies and procedures. They foster collaboration with other travel health nurses and nursing organizations in the United States and elsewhere, lead efforts to establish and promote standards in the specialty and organize initiatives to develop practice innovations. The graduate-level prepared RN may serve as the clinical coordinator for vaccine trials and author travel health guidelines and regulatory content for state and national bodies such as CDC.

### ***Advanced Practice Registered Nurse***

The APRN will function, as per state regulations, either in collaboration with a physician or independently, to provide the full range of pre- and post-travel clinical services including the prescribing of medical therapies. APRNs may also qualify to provide mandated, fitness-to-travel examinations for corporate and governmental organizations as well as examinations of immigrants and refugees. These nurses may serve as tele-health clinicians assisting travelers

at home and abroad, and may also serve as onsite providers accompanying traveling groups. They often have additional skills in travel disease diagnosis, management of complex cases or complicated itineraries, and the care of travelers who are pregnant, immunosuppressed, or coping with advanced illness (e.g., stage IV cancers, kidney disease requiring dialysis). In addition to these clinical roles, the APRN may be responsible for all the professional activities described for the RN and the graduate-level prepared RN. Some may also operate fully independent travel health clinics.

As travel health nursing continues to evolve and expand, nurses are assuming more varied roles within the specialty. Many travel health nurses hold graduate degrees in disciplines other than nursing (e.g., business, law, public health, epidemiology, journalism), and they utilize their specialized knowledge in a wide variety of ways—not only as clinicians, but as faculty members, informatics consultants, and department heads. They work in executive management, policy development, and as nurse leaders in nursing and multidisciplinary professional organizations. They are leaders in regional, national, and international travel health societies and organizations. They own independent practices. They write blogs and maintain a social media presence. They work in risk management and provide care to travelers in the United States and abroad.

### **Specialized Travel Health Nursing Education**

Nurses at every educational level who practice travel health nursing find it necessary to take specialty-specific coursework in addition to the basic courses required for their state licensure as RNs or APRNs. Travel health nursing necessitates that all travel health nurses master a body of knowledge distinct from their foundational coursework of professional nursing education; travel health nursing is not routinely taught in the current registered nurse curriculum in the United States. At present, through undergraduate and graduate-level classes, short courses, CE activities, on the job mentoring, and self-directed learning, RNs acquire the knowledge and skills to provide the complete pre-travel consultation and post-travel triage. APRNs take additional courses to provide post-travel comprehensive evaluation and disease management.

Travel health nurses must know current CDC travel health and safety guidelines that include The Advisory Committee on Immunization Practices (ACIP) pre-travel vaccine recommendations and requirements, as well as destination-specific and activity-specific risks and prevention recommendations. In their clinical and administrative roles, travel health nurses understand the role and guidelines of WHO, international differences in pre- and post-travel standards, medical statistics, global health epidemiology, tropical disease transmission and avoidance, personal injury risks, behavioral health principles, transcultural considerations, and preventive and therapeutic pharmacology. Travel health nurses are familiar

with specialized map reading, global geography including specific health concerns and likely activities in selected destinations, health risk analysis, individual traveler and group prevention counseling, tropical disease triage, and complex vaccination care and schedules for multiple age groups and foreign-borne travelers.

## Entry into Specialty Practice

As per the *ATHNA Model Core Curriculum Guide*, foundational knowledge and skills in the specialty include:

- Knowledge and resources for national and international standards of travel health care (e.g., CDC, WHO)
- Pre-travel and post-travel assessment of the traveler and itinerary (critical questions for these consultations)
- Research methods and statistics (basic research and statistics course to comprehend and interpret the travel health literature)
- Global epidemiology of health and safety risks to the traveler (e.g., map reading, knowledge of U.S. and world geography, global disease distribution, understanding of common tourist activities in different national and world regions)
- Vaccinology (e.g., U.S. routine and travel vaccines, international immunization differences, vaccine administration requirements and documentation, issues for special travel populations such as immunocompromised, pregnancy, immigrants, and refugees)
- Behavioral measures for the prevention of travel-related injury and illness (e.g., knowledge of key prevention techniques for vector-borne diseases, motor vehicle accidents, food- and water-borne illness, personal safety, recreational hazards, climate-related risks)
- Techniques for customized, motivating health counseling designed to maximize the health and safety of diverse travelers with varied itineraries
- If not previously acquired through basic nursing education or through employment, internet search skills, cultural competency, and excellent written and verbal communication skills
- Completion of at least 20 pre-travel consultations under close supervision; more as may be necessary
- Completion of 20 post-travel triage contacts under close supervision; more as may be necessary

## Continuing Education

Travel health nurses pursue any number of post-licensure educational options to build mastery and maintain currency in the specialty. Travel health nurses consult the *ATHNA Model Core Curriculum Guide*, the *CDC Health Information for International Travel*, the *CDC Epidemiology and Prevention of Vaccine Preventable Diseases*, and the *ISTM Body of Knowledge* as just four of the primary resources for acquiring and maintaining current knowledge. Additional resources include subscriptions to travel health journals, memberships in ATHNA and other travel medicine associations, ISTM and American Society of Tropical Medicine and Hygiene (ASTMH), participation in travel health webinars, courses and journal clubs, and attendance at national and international travel health, vaccinology, and tropical disease conferences. Nurses also enroll in well-established short courses developed by experts in the specialty and listed on the *ATHNA Courses and Conferences* website. Travel health risks, regulations, and therapeutic interventions change frequently, sometimes overnight, so travel health nurses recognize the necessity of ongoing education to insure quality patient care.

## U.S. Nursing Programs

Comprehensive academic programs for travel health nursing in the United States continue to lag behind international learning options. To address this gap, ATHNA plans to initiate a comprehensive effort to work with U.S. nursing schools to establish 1) undergraduate courses and concentrations in travel health nursing, 2) a post-baccalaureate certificate, and 3) a graduate degree in the specialty.

Until nursing schools expand their travel health nursing curriculums, U.S. nurses entering the specialty may seek public health and tropical health degrees or complete additional academic coursework in courses such as global health, global epidemiology, tropical disease, and health coaching to supplement standard nursing courses. Many U.S. nurses take advantage of in-house training programs, enroll in several CE-accredited short courses offered year round by U.S. travel health nursing experts, and attend relevant sessions of annual conferences of American Association of Occupational Health Nurses (AAOHN), American College Health Association (ACHA), the Wilderness Medicine Society (WMS), and American Association of Nurse Practitioners (AANP). A select few U.S. nurses who seek more knowledge and skills in this specialty post-licensure may choose to undertake international courses of study such as those offered by the Faculty of Travel Medicine, Royal College of Physicians and Surgeons of Glasgow, the London School of Tropical Medicine, McGill University and the University of British Columbia.

The graduate-level prepared RN in this specialty has completed a masters, DNP, ED, or PhD program that includes academic courses in advanced research methods, statistics, epidemiology, advanced pharmacology, advanced counseling theories, and graduate-level courses in global health, tropical disease, injury prevention, and health education. Additional coursework can include any number of graduate-level management, education or clinical courses, such as health administration, finance, grant writing, project management, adult learning, advanced courses in infectious disease, courses in chronic disease management, and behavioral studies.

APRNs who practice travel health will need to complete a course of study that meets the requirements for state licensure and their professional certification (pediatrics, geriatrics, family, etc.). In addition, APRNs will need to master all the travel health knowledge and skills of the RN and take additional graduate-level courses appropriate to their role as prescribing clinician, practice director, educator, and/or researcher. APRNs who provide post-travel care will need to take advanced course work in tropical disease diagnosis and management. Language courses that facilitate communication with different travel populations are also valuable.

### **The ATHNA Model Core Curriculum Guide**

Although most nursing schools offer some relevant courses, presently there are no academic centers in the United States that offer a defined nursing concentration or degree in travel health. Initially, to address this gap, ATHNA developed a travel health nursing *Model Core Curriculum Guide* that outlines the knowledge and skills required for competent practice. First written in 2002, over the years, this curriculum has served as a foundation for a number of short courses, orientation and training programs, and CE activities offered by nurse experts, travel health companies, government agencies, and academics. Posted on the ATHNA website, it is available for use by individuals and groups seeking to educate nurses in the specialty, to inform and engage many more U.S. nurses in the care of travelers, and to educate travelers about quality travel health nursing care and the specialty. This curriculum guide is periodically validated by U.S. travel health nursing experts and against other national and international curricula (e.g., ISTM Body of Knowledge, Faculty of Travel Medicine, Royal College of Physicians and Surgeons of Glasgow course) and updated regularly.

### **U.S. Certification in Travel Health Nursing**

As of yet, no U.S. nursing certification for travel health nursing comparable to those offered by the American Nurses Credentialing Center exists. Due to this gap, some nurses have turned to alternative methods to acquire a specialty credential signifying professional development, as might be required by employment or for promotion. These nurses have applied for one of three

international, interdisciplinary alternatives: the ISTM Certificate of Knowledge (CTH®), the ASTMH Certificate of Knowledge in Clinical Tropical Medicine and Travelers' Health (CTropMed®), or the Faculty of Travel Medicine, Royal College of Physicians and Surgeons of Glasgow Certification in Travel Health.

ANA recognition of the specialty of travel health nursing was the crucial first step necessary for ATHNA to pursue a certification process in alignment with other U.S. specialty nursing certifications. Not international or interdisciplinary in focus, this travel health nursing certification will be based on the U.S. standards of care and U.S. nursing regulations. The travel health nurse's attainment of this credential will document the highest skills and knowledge of travel health nursing as practiced in this country.

### **Commitment to Lifelong Learning**

Travel health is a dynamic and ever-changing specialty. Travel health nurses are devoted to the health and education of persons and groups who travel domestically and internationally, and travel health nursing professionals focus on the multiple determinants impacting travel health that include infectious disease, environmental risks and personal safety. Travel health nursing practice “encompasses the identification and continuously changing epidemiology of travel-associated disorders and diseases and their geographical distribution, the pre-travel prevention of these conditions through education, vaccination, chemoprophylaxis, and self-treatment (for certain conditions); as well as the care of the returned ill traveler or the newly arrived migrant or refugee” (Schlagenhauf, 2010). There is really no other nursing specialty where recommendations routinely change *overnight*.

Travel health nurses know that yesterday's knowledge of global health and safety risks may not serve to protect today or tomorrow's world traveler; failure to keep current with itinerary hazards and customized risk reduction measures for the various traveling populations (e.g., students, boomers, pregnant travelers, persons with HIV, immigrants, and refugees) can result in excess travel-related illness, injury, even death.

### **Travel Health Nursing: Five Levels of Competency**

To achieve mastery of the specialty, travel health nurses, as with other nursing specialties, progress through five levels of competency as per Benner: novice, advanced beginner, competent, proficient, and expert (Benner, 1982).

- **The Novice Travel Health Nurse**

Nurses new to travel health are novices and need careful, ongoing supervision and active mentoring as they encounter travelers in the pre- and post-travel visit



for the first time. As illustrated in the *ATHNA Model Core Curriculum Guide*, travel health nursing encompasses a myriad of nursing process skills that include assessing patients, analyzing patient subjective and objective data pertinent to travel, educating patients about travel-related health risks and safety concerns, providing the correct routine, recommended and required vaccines for the patient and destination at the correct dose, as well as teaching health promotion and illness avoidance. Novice nurses need to initially observe more experienced nurses during uncomplicated encounters and then will require practice, extra time, and continuous support to provide safe and appropriate uncomplicated pre-travel consultations per clinic protocols. Novice nurses are learning with every encounter, and as learners, they have yet to acquire the requisite decision-making skills or competencies of the specialty. At this time, they must establish the habit of regularly reviewing relevant new research and updated guidelines from recognized authorities. The novice must also come to appreciate the role of the travel health nurse in bringing relevant concerns to their colleagues in their setting and broader communities for both pre- and post-travel patients.

- **The Advanced Beginner Travel Health Nurse**

The advanced beginner is a nurse who has had some experience with travel patients and so will require less direct supervision for uncomplicated traveler encounters. As travel health nursing knowledge is building, this nurse may begin, under supervision, to observe and then deliver care for more complex itineraries or travelers with special needs. This advanced beginner travel health nurse will seek out additional training beyond the core curriculum to demonstrate greater ability to research destinations for health and safety risks, to select and utilize travel health resources and references with greater ability, and to use expanded travel health and global health knowledge and vocabulary. Assessment and counseling skills continue to develop, and the advanced beginner is becoming more efficient in delivering care within the required timeframe of an encounter. This nurse must identify and begin to communicate with all relevant stakeholders including local administrators, colleagues, emergency rooms, and health departments. The advanced beginner must also become fully knowledgeable with agency policies and procedures regarding assessing and triaging patients with any post-travel concerns. There must be a focus on initial assessment and personal protective equipment, isolation procedures, appropriate referrals, and contact information for infectious disease specialists, emergency department staff, and public health departments. To gain mastery of the specialty, the advance beginner travel health nurse will ideally average 20 travelers per week for at least 1 or 2 years.

- **The Competent Travel Health Nurse**

The competent travel health nurse is a registered nurse who fully meets all the minimum competencies for the specialty and is able to provide quality

pre-travel care in accordance with U.S. standards of professional nursing without additional supervision. The competent nurse demonstrates confidence, organization, and efficiency in the careful planning and delivery of pre-travel care. This nurse demonstrates the ability to utilize all available resources to increase his or her knowledge of global travel health issues and regulations. He or she is committed to self-directed learning in a specialty where travel health risks, guidelines, and recommendations can change daily. This nurse has several years of solid experience working with a variety of travelers and trip itineraries, including travelers with special needs, high-risk destinations, and hazardous travel activities. He or she has fully mastered the core curriculum for the specialty. The travel health nurse regularly collaborates and consults with primary care providers and specialists, and local public health authorities regarding any pre- and post-travel concerns. This nurse regularly engages in continuing education activities in the specialty and may have initiated or completed U.S. graduate studies relevant to travel health nursing. A competent travel health nurse may have also chosen to earn one of the international, interdisciplinary certificates from ISTM, ASTMH, the Faculty of Travel Medicine, Royal College of Physicians and Surgeons of Glasgow, or the London School of Tropical Medicine and Hygiene. He or she may be involved in local groups and committees related to travel health as well. In post-travel encounters, the competent travel health nurse, in accordance with the parameters of his or her state nursing scope of practice and institutional policies, provides triage, health evaluation, medical and nursing diagnosis, and management of health problems encountered during a domestic or international journey. The competent travel health nurse refers as appropriate and institutes a plan for follow-up care for all ill or injured travelers, including immigrants and refugees.

- **The Proficient Travel Health Nurse**

The proficient travel health nurse has gained perspective in the specialty and can anticipate with confidence the need to modify routine approaches to pre-travel care for a wide variety of travelers. Decision-making skills are highly developed, and the nurse can adjust his or her planning and care delivery to meet any time constraints. This nurse usually has 5, 10, or more years of robust experience in the specialty, has helped author practice protocols, has served to orient or mentor less experienced travel health nurses, may have participated in travel health nursing research, and may have also earned one of the international, interdisciplinary travel health certificates and/or a relevant U.S. graduate degree (e.g., MPH, MS tropical disease). Proficient travel health nurses may be involved as members or leaders in national travel health groups, organizations, and initiatives. If this nurse is also certified as an advance practice registered nurse, he or she may be examining, diagnosing, treating, and managing post-travel patients within his or her state scope of practice regulations and site guidelines. As an APRN this nurse may also provide fitness-to-travel examinations and the

required evaluations of immigrants and refugees. These APRNs often serve as local experts in providing education and training of primary care staff and developing order sets and screening protocols for symptomatic as well as asymptomatic post-travelers based on current evidence-based guidelines.

- **The Expert Travel Health Nurse**

The expert travel health nurse has a deep understanding of the specialty, an intuitive grasp of travel health nursing issues, and is extremely flexible and proficient. This nurse demonstrates the highest level of analytical thinking in the specialty and is looked to by peers as a clinical authority. The expert nurse demonstrates the strongest commitment to the specialty and so will have earned a relevant graduate degree as well as one of the international, interdisciplinary certificates, and contributed to the travel health nursing research and literature. While continuing to keep current, the expert travel health nurse works to share the full breadth of his or her knowledge at the state, national, and international levels, frequently providing consulting and mentoring services, and publishing travel health-related materials outside the local practice setting. This nurse will likely be a recognized and respected leader in the specialty participating in the development of travel health nursing educational initiatives and leadership of national and international travel health organizations, both nursing and interdisciplinary.

## **Scope of Travel Health Nursing: The Decision Process or The HOW**

Travel health nursing starts from a very broad knowledge base that includes current information regarding global epidemiology, emerging infectious diseases, human safety risks, and environmental impacts on health. This list is quite long and includes diseases from vectors, from other people, spread through contaminated food and water, associated with contact with fresh and salt water, pollution exposure, and from animal bites or stings. Travel health nurses must also be aware of threats to security, such as civil unrest and migration of refugees. One aspect that makes this role unique is the ever evolving—sometimes daily—updates that are necessary to make informed decisions. For this type of data, the travel health nurse relies on trustworthy sources such as WHO, CDC, and the Pan American Health Organization (PAHO) and specialized, commercial subscription database services. The nurse relies on updates from the U.S. State Department, the Immunization Action Coalition (IAC), and organizations such as the International Society of Travel Medicine (ISTM), the American Society of Tropical Medicine and Hygiene (ASTMH), the American Association of Occupational Health Nurses (AAOHN), the American College Health Association (ACHA), and his or her own professional association, the American Travel Health Nurses Association (ATHNA). Travel health nurses

utilize content in peer-reviewed journals including the *Journal of Travel Medicine*, *Travel Medicine and Infectious Disease*, and the *New England Journal of Medicine*. It is also important for travel health nurses to have broad contextual knowledge around global health and traveler issues obtained from quality news sources, such as *The New York Times*, *National Public Radio*, and *The Wall Street Journal*.

Travel health nurses must be familiar with concerns associated with specific travel destinations and a wide variety of trip activities. They know about such hazards as air pollution, jet lag, disinsection risks (pesticide spraying of airline cabins), DVT/embolism associated with long flights or drives, barotrauma with diving, spelunking hazards, altitude sickness, frostbite, hypothermia, heat stroke/sunburn, global traffic statistics, and hazardous road conditions.

Travel health nurses must have a strong working knowledge of current immunology and vaccinology. They must understand basic principles, how to manage the cold chain and store vaccines properly, and all aspects of vaccine administration with a focus on contraindications and adverse reactions. The travel health nurse must be familiar with all U.S. routine, recommended, and required vaccines, as well as all the travel vaccines (including those available outside the United States) such as Bacille Calmette–Guerin (BCG), Japanese encephalitis, cholera, tick-borne encephalitis, rabies, typhoid, yellow fever, dengue, and Ebola. The travel health nurse keeps current with ACIP and CDC updates published in the *Weekly Morbidity and Mortality Report* (MMWR), as well as WHO and the guidelines of destination countries. Travel health nurses must also be knowledgeable about how travelers can access vaccines when traveling as well as how to complete vaccination series at reputable clinics nationally and internationally.

Often, when someone (including some health professionals) refers to travel health preparation, they describe it simply as “just getting your shots.” The travel health nurse is well aware, however, that a professional, evidenced-based travel health preparation encounter is not focused on injections, but on a complex, comprehensive risk analysis that identifies clearly the specific destination risks to a particular traveler and the options available to mitigate those risks via an open dialog with the traveler in which the traveler is a full and active participant. The encounter is a complex, nuanced process that often includes immunizations, as well as extensive health counseling.

Armed with their expert knowledge base, travel health nurses complete a comprehensive assessment of each traveler and each trip. Based on the cumulative information, the travel health nurse then considers the likelihood of specific events and potential outcomes. This assessment will vary from individual to individual and trip to trip. For example, if a traveler will be staying in an urban hotel with air conditioning, the likelihood of malaria will be much lower than if the traveler is camping in a rural, high-transmission area. Another

example would be exposure to Zika virus; the consequences of Zika infection for a non-pregnant traveler are usually minimal as most infections result in no symptoms. However, for a pregnant traveler the outcome of the Zika virus on the fetus can be potentially catastrophic, and is as yet, largely unknown.

For a pre-travel consultation, the travel health nurse provides any routine, recommended, and required vaccinations, medications (e.g., for traveler's diarrhea, altitude illness, leptospirosis prophylaxis, asthma, contraception), prevention and risk reduction counseling (e.g., personal safety measures, food and water precautions, insect precautions, rabies), any appropriate referrals (e.g., mental health consultation, chronic and serious illness specialists, dental care, traveler insurance), and recommendations for follow-up (e.g., fever post-travel, GI illness, booster vaccinations).

In post-travel encounters, travel health nurses will, in accordance with the parameters of their state nursing scope of practice and institutional policies, provide triage, health evaluation, medical and nursing diagnosis, and management of health problems encountered during a domestic or international journey. These problems may include trauma, routine illness, infections, and tropical or more exotic emerging diseases such as Ebola and SARS-CoV-2. The travel health nurse providing post-travel care focuses on the infectious versus the non-infectious, and proceeds to evaluate and manage the serious, treatable, and transmissible based on her level of training and practice and in accordance with site protocols, referring as appropriate. The goal is to treat the patient, while preventing transmission to others and reporting to authorities as indicated.

## **Scope of Travel Health Nursing: The WHY**

In the United States, as well as worldwide, travel health nursing has evolved as a distinct and increasingly complex specialty over the last four decades. Travel health is devoted to the health and safety and education of persons and groups who travel nationally and internationally. Travel health nursing professionals focus on the multiple determinants impacting travel health that include infectious disease, environmental risks, and personal safety. Travel health nursing practice “encompasses the identification and continuously changing epidemiology of travel-associated disorders and diseases and their geographical distribution, the pre-travel prevention of these conditions through education, vaccination, chemoprophylaxis, and self-treatment (for certain conditions) ... as well as ... the care of the returned ill traveler or the newly arrived migrant or refugee” (Schlagenhauf, 2010).

The need and significance for the establishment of the travel health nursing specialty can be attributed to multiple factors: more travelers and more diversity of travelers, more travel-related illness and injury, improved epidemiology

of travel-related risks, new vaccines, recognition of the critical importance of prevention counseling, recognition of the larger national and global role of travel health services, participation in the care of immigrants and refugees, and emergence of planetary health as a critical priority:

- *More travelers and more diversity of travelers*

In this century, and even more recently in the past decade, a steady, upward trend exists in the growing number and diversity of U.S. persons traveling domestically and internationally. In addition, U.S. travelers are engaged in trips with increasing duration and complexity of itineraries and travel activities. Moreover, travelers, often with complicated medical conditions and specialized equipment needed to manage those conditions, are taking journeys at all stages of life.

According to the United Nations World Tourism Organization (UNWTO) international travel increased in 2017 by 7% for a total of 1,322 billion over-night visits, a number higher than the consistent 4% annual increase since 2010. The U.S. Travel Association (USTravel.org) ranks the United States as number one for international trips taken with 21.5% of the world's total. Both groups predict that international travel will continue to increase annually by at least 4–6% in the future. More travel health nurses are needed to meet this growing demand as the destinations of travelers are also changing with increased frequency of travel to Asia, the Middle East, and Africa, placing more travelers at risk for tropical or vaccine preventable infections (CDC “Yellow Book,” 2020).

- *More travel-related illness and injury*

The worldwide increase in global travel has led to more frequent exposure to illness during travel and to instances of diseases imported into the United States (e.g., measles, Zika, multidrug-resistant bacteria). Travel health nurses are prepared to provide accurate pre-travel guidance to reduce excess morbidity and mortality with age and destination appropriate vaccines and travel education. Travelers and the communities to which they return can benefit from this specialized knowledge and expertise. In addition, qualified travel health nurses provide post-travel evaluation and management services of health problems encountered during a journey. The travel health nurse providing post-travel care focuses on the infectious versus the non-infectious, and proceeds to evaluate and manage the serious, treatable, and transmissible based on his or her level of training and practice in accordance with site protocols, referring as appropriate. The goal is to treat the patient, while preventing transmission to others and reporting to institutional and public health authorities as appropriate.



- *Improved epidemiology of travel-related risks*

Over recent decades, epidemiologic studies have defined the risk for acquisition of many travel-related illnesses. Familiarity with the traveler and his or her travel details plus disease etiology and risk, prophylaxis, and self-treatment guidance have positioned the travel health nurse as the “go to” source for optimal global health related information and education. Travel health nurses now have the opportunity to aid travelers in the prevention of numerous vaccine- and non-vaccine-preventable health and safety hazards such as malaria, traveler’s diarrhea, and altitude illness using medications carefully selected for efficacy, cost, and traveler preference.

- *New vaccines*

In the past 30 years, there has been tremendous growth in the field of vaccinology, with the introduction of new travel vaccines to prevent disease. Travel health nursing professionals are the most knowledgeable about the judicious use of travel vaccines such as yellow fever, typhoid, Japanese encephalitis, and cholera across the lifespan and within special populations (e.g., HIV+, pregnant, highly allergic). Travel health nurses attend expert-led educational events focused on the ever-changing ACIP immunization standards and are also well-informed about safe vaccine availability at international destinations. Travel health nurses can interpret and provide guidance with international and state vaccination records. They can assist travelers to select less risky itineraries when required vaccines are in short supply or unavailable (e.g., hepatitis A, yellow fever vaccine) or provide the traveler with international clinics where the required or recommended vaccines may be obtained safely during the journey. This often involves changing the trip timing as some immunizations require documented administration 10 days before arrival, as in the case with yellow fever.

- *Recognition of the critical importance of prevention counseling*

Health counseling to prevent illness and injury is an essential component of pre-travel care. The provision of vaccinations and chemo-prophylactic agents alone no longer meets the CDC or WHO standard for travel health prevention services. Travel health nurses discuss the impact of personal choices on travel-related illness and safety. They provide counseling on such topics as food and beverage safety, motor vehicle accident prevention, risk reduction for climate and other environmental hazards, and access to medical care here and abroad. Travel health nurses also recognize that certain travel populations have special needs and they customize their counseling for such groups, including: seniors, pregnant women, families with young children, persons with comorbidities (e.g., diabetes, CVD, migraines), persons who are highly allergic

or immunosuppressed, business travelers, transgender individuals, immigrants, and refugees, and the VFR traveler who will be visiting friends and relatives.

- *Recognition of the larger national and global role of travel health nursing services*

There is recognition now that the prevention of injury and illness in travelers is only part of the much larger role of the travel health nurse. Travel health nurses serve a critical public health function as travelers and their destinations are increasingly interdependent, and are important epidemiologically because of the travelers' mobility and propensity to carry disease between countries and home. Travelers on vacation, a business trip or service project can impact the "cultural, ecological, physical, and sexual health of the local population at the travel destination" (Hill, 2006). Travel health nurses have the expertise for early identification of potential public health emergencies related to travel, and can rapidly activate public health protocols. As respected professionals in the field of travel health, travel health nurses have an important role in promoting national and global wellness by advising all travelers of evidence-based health and safety information for their current and future travel plans.

- *Participation in Immigrant and Refugee Health Services*

In 2016, more than 1 million immigrants obtained legal permanent resident status in the United States, and more than 6 million people entered the country as nonimmigrant, long-term visitors. Travel health nurses assist in health monitoring and public health communication efforts in conjunction with CDC, state, and local health departments as pertains to arriving refugees and immigrants who have notifiable health conditions. Many travel health nurses also function as contact points within the U.S. medical system for immigrants and refugees providing evaluation and ongoing care of these populations (CDC Yellow Book, 2020). Immigrants also frequently return to their country of origin to visit friends and relatives (referred to in the literature as a VFR traveler) and often erroneously assume they have natural immunity. The travel health nurse educates the immigrant traveler on his or her health risks depending on the itinerary, and will advise a post-travel appointment if additional screenings are needed to protect the traveler or the community to which he or she returns.

- *Emergence of planetary health as a critical priority*

Planetary health is a multidisciplinary field that recognizes that human health and the health of our planet are inextricably linked. Water scarcity, climate change, urbanization, changing food systems, global pollution, civil strife, and displacement have enormous implications for all of us. Travel health

nurses are uniquely qualified to provide guidance to diverse travelers grappling with these concerns.

## **Conceptual Framework of Travel Health Nursing**

The conceptual framework for travel health nursing is based on the interpersonal process in which the professional nurse launches the connection of the person to the events and situations in the environment to which they are traveling, tailors risk information based on the patient's characteristics and behaviors, and assists the patient to meet self-care needs while abroad.

The goal of the travel health nursing professional is to empower the patient to develop an accurate perception of the risk; and make clear the how, where, and when to take action, the consequences of acting or not acting; and the potential positive results of the actions selected.

Self-care is the practice of actions that individuals initiate and execute on their own behalf to maintain health and well-being. The patient's ability to engage in self-care is influenced by age, developmental state, life and travel experiences, sociocultural orientation, health status, physical abilities, and available resources. The travel health nurse assesses the patient's needs for self-care and his or her capabilities to meet those needs, while providing training and education regarding the routine, required and recommended immunizations, as well as national and global safety and security measures.

### **Patient**

Travel health nursing is focused on assisting patients who seek travel health services. Some travelers are propelled forward into a travel health encounter by employers, school authorities, travel agents, or the military. Patients travel individually, as well as engage in groups who travel en masse or organizations that have employees or students traveling for business or educational experiences. In ways unlike other aspects of nursing, the care of the traveler also impacts the family, the community, and the world and depends on the length and destination of the journey, potential hazards encountered during travel, and the communicability of a travel-related exposure.

The travel health nursing professional performs a needs assessment, and then conveys the consequences and management of health issues and associated risks clearly so that the patient may understand the perceived severity. Travel health nursing is methodical and structured to aid domestic and international travelers to perceive severity and benefits, while exploring barriers and options. Travel health nurses explain the steps needed to take the recommended actions, while highlighting the benefits of the validated plans. Obstacles are identified and barriers to action are reduced or eliminated.

Patients are offered reassurance and assistance, even if seeking a travel health consult at the last minute, and are provided the most current information from national and international sources and experts. Travelers are often asked to participate in teach-back scenarios to demonstrate self-care skills to the travel health nurse to enhance knowledge and integrate self-efficacy.

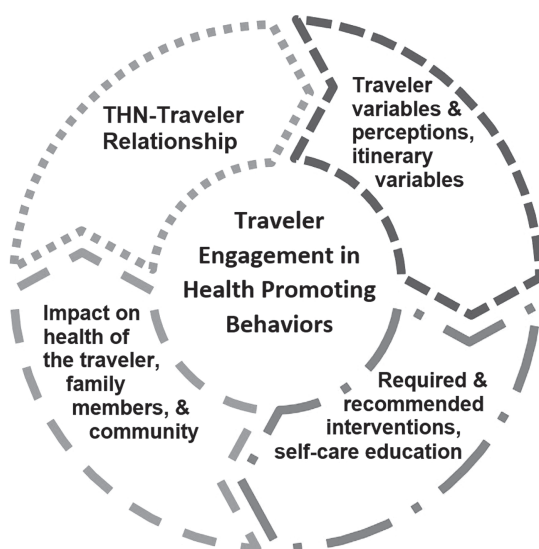
## **Environment**

Environment in travel health nursing has a worldwide scope. The orderly and systematic approach to this issue defines the interaction between the patient and the environment. The travel health nurse professional has to be knowledgeable about the specific patient, destinations planned, order of the trip and length of stay, social, economic, legal, and political factors involved, as well as climate, natural disasters, disease outbreaks, and the physical demands of the trip, coupled with the traveler's physical and psychological abilities. Additionally, the patient must be informed about emergency medical care, trip insurance for medical evacuation, if needed, and local clinics where linguistics would not be a barrier. Advances in scientific knowledge and tele-health technology also impact the traveling public domain with up-to-the-minute access to advice, interventions, and responses. Finally, general conditions such as cultural considerations, food and fluids safety, transportation methods, and air/water pollution must be taken into account, so travelers know when and how to seek appropriate medical assistance.

## **Travel Health Nursing Professional**

Travel health nursing professionals are a cluster of specially educated and trained registered nurses, graduate-level prepared nurses and advanced practice registered nurses who exercise expert nursing process skills of assessing patients, analyzing patient subjective and objective data pertinent to travel, educating about domestic and international health risks and safety concerns, and teaching health promotion and illness avoidance. The methods are evidence-based and in accordance with professional and ethical standards. Travel health nurses practice within the scope of their state nurse practice acts and the standards of the specialty. They function as direct care providers, consultants to businesses and the traveling public, researchers, faculty members, and nursing leaders. Many are entrepreneurs, serving as owners and operators of their own travel health centers. The travel health nursing professional is a strong patient advocate for those traveling domestically and abroad, ensuring that the trip planned is physically possible for the traveler (e.g. an elderly couple who wish to trek through the Amazon may be better served on a cruise ship where medical services have a presence). Essential to the encounter is the use of age-appropriate and evidence-based nursing assessments, followed by detailed documentation of the visit, including immunizations and trip guidance.

## ATHNA's Travel Health Nursing Conceptual Framework



### Application of Code of Ethics Provisions by Travel Health Nurses

ANA's *Code of Ethics for Nurses with Interpretive Statements* is applicable for all nurses. The following discussion of the nine provisions clarifies its relevance to travel health nursing.

**Provision 1: The nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person. (ANA, 2015)**

The travel health nurse strives to assist the traveler to achieve maximum health and safety during and after international and domestic journeys. Travel health nurses provide care to travelers regardless of socio-economic status, immigration status, health status, culture, values, religious or spiritual beliefs, sexual orientation, language, race, gender, or age. Every individual is treated with respect during the pre- and post-travel encounter. When assessing itinerary risks, travel health nurses have an ethical responsibility to have a clear understanding of travel-related health and safety risks of specific populations including, but not limited to, patients who are pregnant, pediatric travelers, seniors, immunosuppressed patients, patients with severe allergies, and immigrants and refugees who return home to visit friends and relatives (i.e. VFR traveler). Travel health nurses set aside biases and prejudices with regard to the purpose of travel, timing of the pre-travel visit, destination choice, or planned trip activities. The basic ethical tenets of autonomy and informed consent are essential in providing

individualized education and resources to mitigate travel-related risks that are often numerous and may include food and water pathogens, insect vector diseases, air quality threats, societal unrest and infectious outbreaks. The travel health nurse always supports the self-care agency of travelers and their right to self-determination as it applies to risk reduction interventions (e.g., immunizations, medications, referrals, change of itinerary). In the post-travel encounter, the travel health nurse withholds judgment regarding the circumstances of the post-travel illness or injury, and acts in the interest of the patient and other stakeholders in a caring and compassionate manner.

**Provision 2: The nurse's primary commitment is to the patient, whether an individual, family, group, community, or population.**

Travel health nurses are central to preparing travelers in a variety of circumstances: solo business travelers, immigrant families returning home to visit friends and relatives, researchers, mission and humanitarian workers, students traveling abroad, patients seeking international medical care, and military personnel, among others. Increasingly, travel health nurses also evaluate and manage the care of the ill or injured returning traveler consistent with their scope of practice and applicable regulations. To assure the highest quality care, travel health nurses reject conflicts of interest and use evidence-based recommendations and interventions free of commercial bias. Travel health nurses prioritize not only individual patients but also the broader population, utilizing a public health perspective to protect the communities both at home and abroad. Travel health nurses work to prevent future epidemics (e.g. advising patients to use insect precautions to circumvent infecting local vectors) and minimize the spread of infectious diseases (e.g., instructing travelers to seek care immediately when they develop fever if at risk of malaria, viral hemorrhagic fever, MERS, avian influenza etc., discouraging unvaccinated travelers from infecting local populations abroad with measles or other illnesses, and rapidly reporting communicable diseases to the appropriate authorities).

**Provision 3: The nurse promotes, advocates for, and protects the rights, health, and safety of the patient.**

During the pre-travel encounter, the role of the travel health nurse is to implement travel health consultations and raise awareness of health and safety risks related to domestic and international travel. Utilizing customized assessment tools and a variety of reliable resources (e.g., CDC, WHO, the Pan American Health Organization), travel health nurses conduct a thorough risk assessment of all aspects of the individual traveler and the trip, including the complete itinerary and planned activities. Travel health nurses then develop a customized plan encompassing evidenced-based personal safety measures, food and water precautions, insect precautions, appropriate vaccines, medications, and



a follow-up care plan to mitigate risks. The travel health nurse administers vaccines in a correct and safe manner, in accordance with CDC, state and institutional guidelines, having fully informed the patient and obtained consent. During a post-travel encounter, the travel health nurse ensures that returning travelers receive any appropriate follow-up care, including completing a vaccine series, triage or evaluation and management in the event of any rabies exposure, post-travel illness, or injury. In addition, responsibility for the patient does not end with referral to a specialist team. The travel health nurse ensures that the transition of care is complete, and follows the patient to the extent feasible or possible throughout the healing process.

**Provision 4: The nurse has authority, accountability, and responsibility for nursing practice, makes decisions, and takes action consistent with the obligation to promote health and to provide optimal care.**

Travel health nursing professionals take responsibility for all aspects of their practice. Travel health nurses are knowledgeable regarding respective nurse practice acts, federal guidelines, and organizational policies, and the *ANA Code of Ethics for Nurses with Interpretive Statements*. They identify any unmet needs and ensure appropriate follow-up. They coordinate with other health care team members and bring attention to any inconsistencies or outdated practices. In their care of the traveler and their interactions with colleagues, they adhere to the *Travel Health Nursing: Scope and Standards of Practice, 1st edition (2021)*. They keep current with frequent changes in global health patterns that impact their care, seeking information from only reliable sources, completing CE courses, complying with state, local, and national regulatory bodies including those for nursing and public health. They regularly evaluate their care, and update their recommendations based on guidance from agencies, such as the WHO and CDC.

**Provision 5: The nurse owes the same duties to self as to others, including the responsibility to promote health and safety, preserve wholeness of character and integrity, maintain competence, and continue personal and professional growth.**

Travel health nurses may function in settings with unique risks to their health and safety. They may work abroad in limited resource settings or practice in clinics involving exposure to post-travel patients with infectious diseases, such as avian influenza, MERS, or viral hemorrhagic fevers, such as Ebola. Moral distress occurs when travel health nurses encounter barriers to care or travelers who received pre-travel care inconsistent with U.S. standards. Travel health nurses must have the moral self-respect and courage to deal with these situations with patient education and advocacy and, as may be indicated, mandatory reporting or professional referrals in-country or abroad. Travel health

nurses often collaborate in settings (e.g., universities, corporations, public health departments) that pose ethical dilemmas concerning the availability and extent of pre-travel services and the adequate financing of those services. Knowledge of state nurse practice acts, CDC travel health guidelines, current travel health research, and global illness and injury epidemiology enables the travel health nurse to demonstrate the expertise and leadership required to ensure comprehensive, quality care for every traveler. Expectations of others may exceed the travel health nurse's scope of practice and thereby jeopardize the health and welfare of travelers, colleagues, and travel health nurses themselves. The travel health nurse maintains self-respect in terms of expectations for adequate orientation and training, time for counseling, access to necessary resources, and use of colleagues for collaboration. Travel health nurses have an ethical responsibility to follow evidence-based recommendations to maintain their health and safety both at work and outside the workplace.

Travel health nurses also must not fall prey to conflicts of interest that compromise character and integrity. They must not engage in personal or professional relationships that adversely influence the quality of care they provide. For example, they may not profit from recommending unnecessary vaccines or skewing research results. Travel health nurses carry the special burden of working in a rapidly changing field—daily updates are usually needed to track epidemiological changes in current outbreaks and emerging infectious diseases. Travel health nurses must seek information only from reliable sources, such as the CDC and WHO. They must avail themselves regularly of CE programs that focus on a variety of areas including tropical medicine, global health, climate change, epidemiology, immunology/vaccinology, and pre-travel consultation and communication. Finally, travel health nurses ensure continued growth and development through participation in professional organizations such as the American Travel Health Nurses Association, the International Society of Travel Medicine and the American Society of Tropical Medicine and Hygiene.

**Provision 6: The nurse, through individual and collective effort, establishes, maintains, and improves the ethical environment of the work setting and conditions of employment that are conducive to safe, quality health care.**

Travel health nurses, working in concert with other health professionals and relevant stakeholders, operate in a myriad of roles to promote ethics in the workplace and ensure high-quality care. Travel health nursing professionals are clinicians, academic researchers, educators, public health officials, executives, and national, as well as international, policy developers. They participate in quality assurance activities, such as chart review, evaluation of services using outcome measures, and patient surveys. They implement policies that prevent commercial interests, such as pharmaceutical companies, from adversely

influencing their work. They develop and seek out evidenced-based interventions (e.g., ACIP vaccine recommendations). They work across disciplines and utilize the latest technological developments to eliminate obstacles, improve access to care, eliminate inefficiencies, reduce costs, and enhance quality of care.

**Provision 7: The nurse, in all roles and settings, advances the profession through research and scholarly inquiry, professional standards development, and generation of both nursing and health policy.**

Travel health nurses advance the specialty by integrating evidence-based findings into practice, taking on projects, serving on committees, and assuming leadership positions within their own organizations, as well as outside institutions. They initiate, promote, and collaborate on research endeavors through academic institutions, professional societies and organizations, such as the American Travel Health Nurses Association, International Society of Travel Medicine, American College Health Association, American Association of Occupational Health Nurses, the U.S. Armed Forces, and Centers for Disease Control and Prevention. They work across disciplines, including tropical medicine, infectious disease, public health, pharmacy, and veterinary medicine, to ensure that travel health nurses have a seat at the table to shape policies affecting their patients. They advocate at their workplace and in the public arena for improved care to international travelers utilizing the *Travel Health Nursing: Scope and Standards of Practice, 1st edition (2021)*.

**Provision 8: The nurse collaborates with other health professionals and the public to protect human rights, promote health diplomacy, and reduce health disparities.**

Travel health nurses have an ethical responsibility to engage in activities that promote and protect the dignity and basic rights of all individuals. Health is a universal right and travel health nurses work every day to make it a high national and international priority. Travel health nurses collaborate across a wide variety of disciplines to promote health individually, locally, and globally through institutional projects and committees, community action and consumer groups, as well as legislative and policy work. They give presentations, conduct research, teach and mentor colleagues, engage in legislative efforts and effectively utilize print, broadcast, and social media to address concerns. They address such disparities as access to pre- and post-travel care, providing accurate and evidenced-based information on immunizations, preventing and controlling infectious diseases and their responsible vectors, and addressing the impact of climate change on global health and infectious disease. They also address world-wide accident prevention, especially the high rates of motor vehicle accidents, ensuring reproductive rights by providing safe and effective

methods of contraception, and mitigating, to the extent possible, sexual assault, human trafficking, exploitation, and travel concerns of vulnerable populations including, but not limited to, the LGBTQ+ community, immigrants and refugees, and travelers with physical disabilities or mental illness.

**Provision 9: The profession of nursing, collectively through its professional organizations, must articulate nursing values, maintain the integrity of the profession, and integrate principles of social justice into nursing and health policy.**

Nurses have a long tradition of being formidable advocates for change, and nurses working collectively can be even more effective change agents. There is power in numbers, and travel health nurses working with their professional organizations to articulate nursing values and health priorities can improve the health and well-being of patients and communities worldwide.

The values of travel health nursing professionals are advanced broadly and communicated widely through the American Travel Health Nurses Association (ATHNA) and its membership. This professional association serves as a conduit to maintain and further the integrity of the specialty practice. It works to align the guiding principles of evidence-based practice with those of social justice and integrate them into nursing policy. ATHNA provides travel health nurses with ready access to the latest clinical updates, courses and conferences, specialized standing orders, and other online resources that support this effort. The association promotes personal and global health and safety, as well as research integrity, and regularly identifies and addresses weaknesses in travel health care delivery. ATHNA highlights the special concerns of specific populations of travelers to enhance the quality of care for all.

Travel health nurses serve as experts to guide decisions involving travel health care both in the United States and internationally. They establish education requirements, standards of care, health policy and national and international health agendas. Travel health nurses, acting through ATHNA, are strong advocates for the profession as illustrated by their recent success in convincing CDC to avoid using “travel health physician” in their publications, replacing this with more inclusive terms such as travel health “professional” or “clinician” to more accurately reflect the role of nurses as travel health experts. Travel health nurses, acting through ATHNA, are strong advocates for the profession as also illustrated by the successful ATHNA effort to achieve ANA recognition of travel health nursing as a specialty practice of professional nursing.

## **Historical Perspective: The Specialty of Travel Health Nursing**

While there have always been travelers and clinicians willing to help prepare them for their journeys, travel medicine evolved as a U.S. medical specialty in

the 1980s. Initially, the specialty was known as “Emporiatics,” and the number of providers grew as U.S. businesses expanded globally, tourism increased, and more students elected to study abroad.

Travel health nursing developed in parallel to travel medicine. During the 1980s, nurses in college health, occupational health, and ambulatory care were called upon to add pre-travel assessment and risk management services to their clinical role. At first, these nurses supported physicians in the care of patients traveling internationally, but by the late 1980s, nurses started to assume central roles in the preparation of all travelers. These nurses came from many different professional nursing backgrounds, but soon they all self-identified as travel health nurses. Often confused by the public as nurses who traveled from hospital to hospital for seasonal or temporary employment (“traveling nurses”), travel health nursing professionals brought a strong commitment to prevention and quality care to their practice of preparing business and personal travelers. Of necessity, they were all self-taught since no travel medicine textbooks existed, the CDC “Yellow Book” was only a small pamphlet, and nursing schools offered little curricula specific to travel health.

In 1991, physicians and nurses from around the world met in Atlanta to form an international, interdisciplinary professional organization, the International Society of Travel Medicine (ISTM). More than 600 nurses in attendance voted for a more inclusive name; however, when these nurses left the meeting, there was already consensus that U.S. nurses needed to form their own network for support, education, and professional development. Informal groups started to spring up around the country and then, in 1999, the New York Nurses Network was established. This self-funded group, initially comprised of 25 nurses, met six to eight times a year for case studies, clinical updates, and professional networking. At the same time, principals in the New York group also started a nursing task force within ISTM, joined ISTM committees, and presented posters at biennial international meetings. At these meetings in Paris, Lisbon, and Montreal, they learned about travel health nurses coming together as a national specialty in the United Kingdom and in the Netherlands, and soon they, too, started to envision a travel health nursing specialty in the United States.

By 2004, the New York Network had seriously outgrown its name and now included nurses from around the country; the necessity and benefit for creating a national professional travel health nursing organization was apparent. With that in mind, ATHNA was incorporated in 2004 and established as a tax-exempt entity under Section 501(c) (3) of the U.S. Internal Revenue Service Code and registered with the NYS Attorney General’s Charities Bureau. As described in the articles of incorporation, “This Corporation is formed to advance the profession of travel health nurses. Its purpose is educational within the meaning of 501(c) (3) of the Internal Revenue Code, including, but not limited to, the advancement of travel health nursing through education and

public awareness.” ATHNA’s inaugural board included founding members from the New York Network, as well as nurses from Wisconsin, California, Colorado, Texas, Massachusetts, and New Hampshire.

From its inception, ATHNA was committed to the inclusion of all nurses (RNs, graduate-level prepared nurses, APRNs) who provided care to travelers; the organization reached out to nurses working in college health, occupational health, public health, the military, private practice, and academic centers. In its earliest years, ATHNA was not yet a full-fledge membership society, but rather ATHNA saw its purpose to serve as a primary professional resource for U.S. nurses entering the field and as an engine for professional development and advocacy for the specialty of travel health nursing in this country.

With those goals in mind, ATHNA established an open-access website for communication ([www.athna.org](http://www.athna.org)), wrote the first *Travel Health Nursing: Scope & Standards of Practice* (2004) and stated its mission as: “The Mission of ATHNA is the advancement of the profession of travel health nurses through education and public awareness.” On its fifth anniversary as a professional society, ATHNA voted to expand into a membership organization. That goal was fully achieved on April 15, 2010.

Since that time, ATHNA has continued to grow its numbers and expand its support for travel health nursing. Today, more than 2,200 nurses representing every state, as well as other nations, are registered members. To promote networking and keep travel health nurses updated, ATHNA continues to add website content, including a Clinic Manual, Clinic Toolkit, standing order templates, updated listing of *Courses and Conferences*, a *CareerCenter*, as well as links to CDC and the International Association for Medical Assistance to Travelers (IAMAT). Regular educational features include a monthly Constant Contact communication, the ATHNA blog *TravelBytes* and the Q&A column *Ask Us Anything*. Since 2010, ATHNA has offered a variety of CE activities that now includes its unique and innovative annual NED: Networking, Education, and Development Day. This free member benefit is a novel CE activity offered simultaneously each summer in multiple U.S. communities. In 2018, members attended NED sessions in California, New York, Texas, and Pennsylvania. In addition, ATHNA provides periodic free or low-cost CE accredited content on its website. To support comprehensive and quality travel health nursing education consistent with U.S. standards, ATHNA has also created and posted on its website a *Model Core Curriculum Guide* for nurses entering the specialty and for the development of short courses, CE activities, and nursing school courses, concentrations, post-baccalaureate certificates, and graduate degrees in the specialty.

Since its founding, ATHNA has been a strong advocate for travel health nursing research and its *Travel Well Research Award* has been conferred several



times over the past decade. ATHNA facilitates the collaboration of members on studies that benefit travel health nursing as a specialty, as well as studies to improve traveler outcomes. Recently, ATHNA members were awarded first prize for their ISTM poster “The Highly Allergic Traveler: Simple Steps to Save a Life.” Currently, ATHNA is partnering with CDC, ISTM and ACHA on a multi-site, multi-year study of student travel health.

ATHNA created a working group in 2012 to explore official recognition of travel health nursing as a specialty. In 2017, the ATHNA Board of Directors met in retreat to develop a 5-year strategic plan that included an updated mission statement and established the goal of ANA specialty recognition as a priority. A proposal to create an ATHNA Fellows program was launched, and a plan for the first national ATHNA meeting was initiated. The Board also made a commitment to foster certification in alignment with U.S. standards for travel health nurses and to encourage academic courses, concentrations and degrees in the specialty. The mission of ATHNA was updated to reflect these goals: “The mission of the American Travel Health Nurses Association is to advance nurses engaged in the care of travelers through professional development, evidence-based practice and advocacy.” The inaugural class of ATHNA Fellows, ten outstanding contributors to the science and development of travel health nursing, was introduced at the well-received first national ATHNA meeting held on June 4, 2019 at the Barbara Jordan Conference Center in Washington, DC. Conference attendees expressed the universal hope that this meeting might become an annual event.

## **Future Trends**

Travel health nursing is a dynamic and rapidly evolving specialty because of numerous and ever-changing factors that impact the traveling public such as vaccine-preventable diseases and the availability of routine, recommended, or required vaccines; non-vaccine-preventable diseases that spread without warning over a large geographical region or regions, the age, gender, health, physical and psychological capabilities of the traveler, and the purpose of the trip, including planned activities, season, political climate, and potential for extreme weather hazards. At present, travel health nurses have concerns about inconsistencies in the delivery of pre- and post-travel nursing care, questions about patient safety, concerns about the undue influence of pharmaceutical representatives and potential conflicts of interest in for-profit settings, as well as the lack of training opportunities in travel health nursing. Travel health nurses are frustrated by vaccine shortages and inadequate insurance coverage for prevention services; they are eager for more evidence-based recommendations, and they bemoan the public’s lack of understanding about what constitutes a comprehensive, quality pre-travel encounter (it is so much more than “just shots”). Unfortunately, travel health nurses also face frequent challenges regarding the



lack of travel health training and knowledge that still exists among primary care providers and specialists.

It is anticipated that the future of travel health nursing will include even more travel and more traveler diversity, advancing technology, planetary health components, vaccine considerations, cost containment issues, expanding role for the nursing profession, recognition of the larger global role of travel health nursing services, expansion of ATHNA, establishment of U.S. travel health nursing post-baccalaureate certificates and graduate degrees, and U.S. travel health nursing certification.

***Even more travel and more diverse travelers:*** According to CDC (2017), Americans of all ages made more than 73 million trips internationally in 2015; that number is expected to increase by 4% to 7% annually as more citizens are traveling for business, education, pleasure, volunteerism, health care, or to visit friends and relatives. More than one billion people traveled worldwide internationally in 2017, and approximately 50% became ill or injured while overseas. Furthermore, some travelers required medical care upon arriving home (Keystone et al., 2013).

As more people travel this country and the world, the need for skilled travel health nurses and pre-travel health services will be critical in providing travelers with health and safety information specific to their particular needs and destinations. Additionally, travel health nurses will be increasingly able to offer traveling patients effective and specialized in-transit care using advanced technology and access to collegial resources in all parts of the nation and the world. There will also be an increased need for travel health nurses prepared to deliver post-travel care to the greater number of travelers expected to return home ill or injured. Much of this care requires the specialized education and training of the travel health nurse and is generally not available in primary care offices or urgent care centers.

***Advancing technology:*** Technology across all health specialties is increasing and travel health is benefitting from this innovation. In coming years specific considerations for the travel health nurse will include how best to assist the traveler with access to more travel apps and alerts, and ready access to electronic health and immunization records, both domestic and international. The travel health nurse will have opportunities to utilize technology to decrease costs and provide higher quality services via video/tele-health visits and to access point-of-service labs and other diagnostics as needed.

***Planetary health:*** Travel health nurses already recognize that the health of individuals is interdependent with the health of animals and the environment. According to CDC, “One Health is defined as a collaborative, multi-sectoral, and trans-disciplinary approach—working at the local, regional, national, and

global levels—with the goal of achieving optimal health outcomes, recognizing the interconnection between people, animals, plants, and their shared environment (CDC, 2017).” It will be increasingly essential that travel health nurses collaborate and coordinate with professionals from veterinary medicine, environmental groups, public health, the law, etc. It is likely that ongoing climate change will bring with it new and emerging infectious diseases, as well as serious, non-infectious, and chronic illnesses, such as pollution-related exposures that could affect travelers going to any destination.

***Vaccine considerations:*** Vaccines are considered one of the cornerstones in preventing some of the most common illnesses encountered in global travel, including predictable disease and exotic syndromes. While new vaccines continue to be developed, availability, efficacy, safety, cost, and acceptability will remain issues for both the traveling public and travel health nurses alike.

***Cost containment issues:*** Travel health nurses will need to find innovative ways to effectively engage stakeholders and provide high-quality services in ways that are affordable and sustainable for all travelers.

***Expanding role for the nursing profession:*** As reported by the Robert Wood Johnson Foundation in its 2019 report, “Activating Nursing to Address Unmet Need in the 21st Century,” nurses will increasingly have a larger role in meeting the health needs of individuals and populations. With their global knowledge and perspective, travel health nurses will have more opportunities to contribute to the public health of this country and others. Travel health nurses’ knowledge of vaccines, global diseases (e.g., Ebola, MERS, COVID-19, avian flu, and measles) and WHO international health regulations (IHR) can assist governments, corporations, universities, and others with the prevention of local outbreaks, stigma, and fear.

***Recognition of the larger global role of travel health nursing services:*** There is growing recognition that the prevention of injury and illness in travelers is only part of the much larger role of the travel health nurse. Travel health nurses serve a critical public health function as travelers and the destinations to which they journey are increasingly interdependent, and travelers are important epidemiologically because of their mobility and propensity to carry disease between countries and home. Travelers on vacation, a business trip or service project can impact the “cultural, ecological, physical, and sexual health of the local population at the travel destination (Hill, 2006).” Travel health nurses have the expertise for early identification of potential public health emergencies related to travel, and can rapidly activate public health protocols. As respected professionals in the field of travel health, travel health nurses have an important role in promoting global wellness by advising travelers of evidence-based health and safety information for their current and future travel plans.

**Expansion of ATHNA:** As estimated by CDC and others, more than 25,000 nurses now provide travel health services in a variety of settings around the United States. ATHNA will continue to expand its membership and mission to represent the varied interests, work sites, educational, and professional needs of travel health nurses. ATHNA will also enhance its collaboration with other major international organizations for travel health, including ISTM, ACHA, AAOHN, and ASTMH. One ongoing initiative is the joint Student Travel Abroad research project with CDC, ACHA, ISTM, and ATHNA.

**U.S. travel health nursing education:** As domestic and international travel increases and more nurses participate in pre- and post-travel care, the need for travel health nursing curricula will grow. ATHNA will continue to offer relevant CE programs, revise and promote its website-based *Model Core Curriculum Guide*, and continue its efforts for the inclusion of travel health nursing content in undergraduate and graduate nursing education with more courses, as well as a travel health nursing concentration, a post-baccalaureate certificate, and graduate degrees in the specialty.

**U.S. travel health nursing certification:** Lacking a U.S. equivalent, a small number of travel health nurses who seek a specialty credential for professional development, employment, or promotion currently apply for one of three international, interdisciplinary alternatives: the ISTM Certificate of Knowledge (CTH®), the ASTMH Certificate of Knowledge in Clinical Tropical Medicine and Travelers' Health (CTropMed®), or the Faculty of Travel Medicine, Royal College of Physicians and Surgeons of Glasgow Certification in Travel Health. However, none of these are specific to professional nursing, nor do they confirm knowledge or compliance with U.S. standards of nursing or travel health care. In addition, none adhere to the eligibility or renewal criteria typical of any American Nurses Credentialing Center (ANCC) certifications. Travel health nurses are asking for U.S. certification, and ATHNA will continue to explore options for establishing a certification in travel health nursing consistent with other professional nursing certifications recognized in this country.

The future will pose significant challenges, but travel health nurses are in a unique position to address these concerns, ensure travelers receive the highest-quality care, and protect the communities to which travelers visit and return. Travel health nurses will meet these challenges in several key respects by:

- Aligning U. S. travel health nurses with medical, pharmacy, and international nursing organizations specializing in travel health
- Increasing the publication of evidence-based travel health and travel health nursing research

- Providing new health career options for nursing students and expanding undergraduate and graduate curricula to include travel nursing health topics and concentrations utilizing the *ATHNA Model Core Curriculum Guide*
- Ensuring nursing professionalism with a code of ethics specific to travel health nursing practice