

CHAPTER 17

Travel and Mental Health

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**MEDEVAC STATISTICS**

Although mental health is often an afterthought in travel medicine, in fact, the psychiatric impact of travel is an area of growing interest, not only because of the prevalence of international travelers from all sectors of the population, but also because of the changing nature of international travel. A recent Swiss travel clinic study of 22,584 travelers seeking pre-travel advice revealed the purposes of travel as follows: tourism, 81.5%; visiting friends and relatives, 7.8%; business, 5.6%; other (volunteer work, study, pilgrimage and so on), 5.1%. Although the majority of travel is still for tourism, increasingly, medical providers are called on to support people traveling for mission work, disaster relief, or military and paramilitary purposes. These changes make it critical for health providers involved in the support of travelers to be aware of common mental health problems that emerge during travel so that they can advise travelers on risks and offer effective support when problems emerge.

The World Health Organization recently drew attention to the importance of mental health issues for travel medicine, placing mental health disorders among the three major reasons for medical evacuation during travel (the other two being injury and cardiovascular accidents). Though statistics vary, the percentage of medevacked travelers who come back for psychiatric causes is between 6% and 11%.

In one large telephone survey of young travelers returning after travel to tropical countries, 11.3% reported some sort of psychiatric or psychological symptoms during travel. Unremarkably, the most common symptoms experienced were nonspecific symptoms such as sleep disturbance (53.1%), fatigue (48.7%), and dizziness (39.3%). But 2.5% of these people had had psychological symptoms they described as severe, and 1.2% had symptoms that lasted more than 2 months after return. Travelers who reported these symptoms were significantly ($p < .001$) more likely to have been on mefloquine prophylaxis for malaria. Consideration of the psychiatric impact of mefloquine (and chloroquine) on travelers should certainly be a factor in evaluating patients returning with psychiatric symptoms, especially symptoms of anxiety and/or psychosis.

A study of British diplomats found that 11% of all medevacs of travelers were for mental disorders. The most common causes for medevac were depression (41.2%), family crisis or “welfare” problems (23.5%), and debriefing following a critical incident (17.6%). In this study 5.9% were medevacked for alcohol-related problems.

PRE-DEPARTURE ASSESSMENT AND ADVICE: RISK FACTORS

While current knowledge does not allow us to make reliable predictions about the exact risk of the emergence of various mental health conditions, the destination, duration, and purpose of travel must be considered when advising patients at risk for mental disorder. For short-term travelers with a history of mental health disorders, the most important preparation

would be a review of prior psychiatric history, consideration of recurrence and how it might be managed, and education on the risks of casual sex (which is common among travelers and has mental health implications) and excessive alcohol use. For longer-term travelers, more extensive pre-travel assessment can be helpful. This would involve a more detailed psychiatric and substance abuse history, a history of prior exposure to trauma, discussion of how needed medications will be obtained, and consideration of the closest available mental health support in the traveler's native language. It should also give consideration to "resilience factors" (see below). Helping travelers think these issues through in advance helps mitigate the effect of problems that arise during travel.

Aside from prior psychiatric history, the most important risk factor for the emergence of psychiatric disorders during travel is level of stress experienced, and international travel is often stressful. Psychosocial stressors have long been known to exacerbate psychiatric conditions in travelers, especially depression, bipolar disorder, and psychosis. People with a history of depression are vulnerable to a number of the stresses of travel, especially international travel with duration of more than a few weeks. The sleeplessness caused by travel across many time zones, unexpected delays, misunderstandings due to language and culture barriers, and interpersonal stresses created by travel can all contribute to depression, so travelers vulnerable to depression should be prepared to anticipate stressors, have a game plan for dealing with the unexpected, and know where to turn in case problems arise.

Anxious patients who are traveling to malarious areas must use alternatives to mefloquine and chloroquine for malaria prophylaxis. Travelers with a history of anxiety or panic who are headed for stressful circumstances should be not only warned of the increased risk presented by stressful circumstances but counseled to assess the level of support available to them during travel and to determine how they will be supported should problems arise.

Alcohol-use disorders are also exacerbated by the stress of travel, and people are known to drink more freely during travel. As a result, alcohol-use disorders are a common focus of mental health concern among both short- and long-term travelers. Evaluation of travelers should include inquiry as to a history of an alcohol-use disorder along with guidance for moderate use of alcohol while traveling abroad and the importance of keeping in touch with friends or relatives during travel.

Patients on medications for chronic psychiatric conditions should be sure they have adequate medication and that it is located in more than one place, so that even if one portion is lost, a backup interim supply will be available. **Box 17.1** contains additional useful advice for patients with chronic psychiatric problems.

PRE-TRAVEL EVALUATION OF RESILIENCE

Classically, mental health evaluations have focused primarily on the risk factors discussed above. In recent years, however, there has been an additional focus on assessing resilience, since resilience factors seem to play an important role in assessing the likelihood of the development of mental health problems. "Resilience" in this context refers to a person's ability to recover after lengthy periods of adversity or after a traumatic event.

Increasingly, resilience assessment and training has become a part of preparation for people going on humanitarian travel of medium-term (3-12 months) duration. The resilience factors, as identified by Southwick and Charney, are factors that the traveler can start incorporating into his or her way of life in order to maximize the chances of a successful travel experience. Some of the resilience factors identified by Southwick and Charney include identifying sturdy role models, seeking out a resilient mentor, using cognitive flexibility as a coping style (e.g., humor, acceptance, reframing), active problem solving, drawing from religious and spiritual resources, and finding meaning in adversity. Travel preparation oriented around resilience may lessen vulnerability to traumas during travel where there is a significant risk of exposure to hardship or traumatic events. Southwick and Charney's summary of 10 factors that they observed in resilient individuals can also inform evaluation of travelers (**Box 17.2**).

Box 17.1 Practical advice for short-term travelers at risk for exacerbation of a psychotic disorder

1. Make sure you have travel insurance and that it covers medevac for psychiatric disorders.
2. Be sure you have an adequate supply of medicine, carry extra medication, and keep medicines in more than one place.
3. Educate yourself on where and how you can obtain medication in case you lose your medications.
4. Do not take travel medicines that may exacerbate psychiatric conditions unless your physician approves. Take an alternative to mefloquine if you need malaria prophylaxis; be cautious about chloroquine as well. Avoid taking modafinil or similar drugs for jet lag; be sparing in the use of zolpidem and other sleep-inducing medications that can affect memory and perception.
5. Attend to sleep; minimize the effects of jet lag by exposure to light and assuming the local sleep schedule as quickly as possible on arrival.
6. Pay special attention to prepare yourself for cultural changes to minimize a sense of cultural displacement.
7. If indicated, be sure to carry antianxiety medication to use in case of a panic attack.
8. Plan for consultation with your psychiatrist on return.

(Adapted from Vermersch, C., Geoffroy, P.A., Fovet, T., et al. 2014. Voyage et troubles psychotiques: clinique et recommandations pratiques. Presse Med. 43, 1317–1324.)

Box 17.2 The “resilience factors”

1. Identifying and emulating sturdy role models
2. Maintaining cognitive flexibility
3. Using active problem solving
4. Adopting an attitude of realistic optimism
5. Seeking social support
6. Following the inner moral compass
7. Drawing from religious/spiritual resources
8. Exercising intentional physical, mental, and emotional training
9. Exercising the ability to find meaning in adversity
10. Assuming responsibility for one's own emotional well-being

(Adapted from Southwick, S.M., Charney, D.S., 2012. Resilience: The Science of Mastering Life's Greatest Challenges. Cambridge University Press, New York.)

A final component of helping patients with psychiatric vulnerabilities to travel safely involves assessment of possible resources for the patient at the destination. Making such an assessment can be a complex process, not only because psychiatric resources can be extremely difficult to locate in the developing world, but also because, even in the developed world, such resources may well be suitable only for short-term travelers. Long-term travelers will need psychiatric care delivered in their native language and even developed countries in Europe may not have clinicians willing to cater to English speakers for ongoing care. Patients should be cautioned that, if they plan to be in a foreign country for an extended period of time, arrangements must be made in advance for the support of chronic psychiatric problems.

COMMON MENTAL HEALTH PROBLEMS AMONG TRAVELERS AND HOW THEY ARISE

Sleep, Travel, and Psychiatric Problems

There are a number of psychiatric problems that can affect travelers. One of the most common is sleep disruption, which is problematic for most people traveling across many time zones. It has mental health implications even for those without a prior mental health history, and sleep disruption can also exacerbate a pre-existing condition. International travel affects sleep in a variety of ways; jet lag, high altitude, alcohol, overnight flights, change in bedroom surroundings, climate, allergies, and pollution all can affect sleep. Sleep deprivation impairs normal cognition in a variety of ways. The decreased attention and vigilance create an increased risk for accidents and misunderstandings. Also affected are working memory, short-term memory, and processing speed. Thus, sleep deprivation interferes with adaptation and adjustment. In addition, extended sleep deprivation, most likely during long-haul travel, negatively affects mood and even emotional intelligence.

Sleep abnormalities are part of numerous psychiatric conditions (major depression, bipolar disorder, attention deficit hyperactivity disorder, schizophrenia), and there is evidence that the disruption of circadian rhythms may precipitate and escalate psychiatric disorders.

A recent study of jet lag and psychiatric disorders reviewed current evidence on this topic and noted an association between jet lag and depression, hypomania, schizoaffective disorder, and psychotic disorders. Interestingly, direction of travel was also found to be important: the emergence of depression is more likely to be associated with traveling in an eastward direction, while the emergence of hypomania is more likely to be associated with westward travel. Efforts to mitigate the effect of jet lag on psychosis with medication have been attempted, and in a small study, the use of melatonin to promote sleep seemed to maintain stability, but this approach needs further substantiation.

Careful attention to management of jet lag is particularly important with patients who have a history of psychiatric disorder, especially an affective disorder. Jet lag is usually managed with a combination of practical measures (exposure to light at appropriate times of day, adjusting to the local schedule), and short-term use of sleep medications (see Chapter 9). Use of zolpidem or zaleplon for 3–4 days after travel across multiple time zones is a common and often effective pharmacological approach to the situation. Patients with a history of psychiatric disorders should be warned against the use of alcohol as a remedy for jet lag, as this may contribute to mood instability and inhibit adjustment.

Alcohol-Use Disorders and Their Consequences

Abuse of alcohol during travel is a common occurrence. There are many reasons for this. Airlines and airports promote alcohol, and alcohol is often cheaper on the local market. Some feel that drinking alcohol is safer than drinking the local water, and alcohol use sometimes serves as a quick but ineffective fix for the loneliness and isolation of overseas living.

Because it is so readily available, alcohol use should be considered early on in the evaluation of any patient with altered mental status who has been traveling in an overseas setting. In certain countries, illegally produced alcohol can be a particularly vexing problem, since such brews can contain toxic substances that alter mental status markedly and are hard to identify. Further, intoxicated travelers may find themselves in situations in which there are no friends or relatives to inhibit heavy drinking. Travelers may come to medical attention after being found unresponsive in a hotel room or because of failure to pay a hotel bill or overstaying a reservation.

As noted, studies of medevacs indicate that alcohol abuse is a frequent cause for medevac, and transporting patients who are having alcohol withdrawal symptoms can be particularly problematic. Chronic heavy drinkers may develop alcohol withdrawal symptoms such as sweating, tachycardia, agitation, anxiety, insomnia, tremor, nausea, illusions, hallucinations, and seizures. Airlines will not knowingly transport patients who are psychiatrically unstable.

Therefore, it is usually necessary for such patients to be stabilized locally prior to transport. In the event that patients are able to travel, they must be accompanied by a medical attendant who can observe evidence of emerging withdrawal symptoms. A medical attendant may also be in a position to provide support with a benzodiazepine such as lorazepam or temazepam to prevent the emergence of a more serious alcohol withdrawal syndrome.

Use of licit or illicit drugs is also a frequent reason for mental health attention. Aside from problems with drugs of abuse common in the United States, travelers to some developing world countries have been known to participate in ceremonies that involve hallucinogenic drugs unfamiliar to medical providers (e.g., iboga in Gabon or yopo in Venezuela, and ayahuasca in the Peruvian Amazon).

Trauma- and Stressor-Related Disorders

For travelers who are staying in a new culture for an extended period of time, the difficulty of cultural adaptation can be dramatic. "Culture shock" is described in the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-V), as a V code, Acculturation Difficulty (V62.4). Stressor-related disorders, that is, time-limited depression, anxiety, or a mixed state, are common in travel. In addition to the stresses of short-term travel, long-term travelers must adapt to a new culture, and even when the discomfort and dysphoria related to a new culture are of limited duration, patients sometimes seek out medical providers for information and reassurance. Adjustment disorders characterized by predominant emotions of anxiety or depression, but directly related to an identifiable stressor, do not meet the criteria for another psychiatric disorder and are presumed to be time limited. Information that is useful for patients with cultural adjustment issues is provided by intercultural trainer Ray Leki in his book *Travelwise* (2008): when in a new culture, focus on self-awareness, self-management, social awareness, and relationship management. Maintain a sense of humor and work hard at developing empathy toward your foreign contacts. Such advice can be reassuring to patients and provide a way forward for them.

Panic attacks and anxiety disorders are also stress sensitive and represent a major reason for psychiatric treatment following travel. In one study from Israel, anxiety disorders constituted almost half the psychiatric problems in returning patients who received psychiatric treatment.

The Psychological Sequelae of Exposure to Traumatic Events

Exposure to dangerous events is a hazard of many kinds of travel, and a recent meta-analysis found that exposure to intentional trauma produces posttraumatic stress disorder (PTSD) in 37% of exposed individuals. Additionally, travelers going out for disaster relief or refugee assistance frequently hear distressing stories from directly affected individuals, and this exposure, too, can create posttrauma symptoms of emotional numbing, avoidance of reminders, intrusive thoughts, hyperarousability, and negative thoughts and mood. If such symptoms persist beyond a month, referral for treatment for PTSD may be necessary. In current psychiatric practice, both psychological and psychopharmacological therapies have a role, and treatment by a knowledgeable clinician may markedly improve outcome after trauma exposure.

Psychosis

Psychosis is also precipitated by stressors, and the emergence of psychosis during travel is well documented. Patients with pre-existing disorders with a psychotic component, such as schizophrenia or bipolar disorder, may have exacerbations during travel. But psychosis can also emerge as a result of the strangeness of a different culture, and a brief reactive psychosis during travel can be a surprising occurrence. Such psychoses, if not indicative of an underlying disorder, may well be transient and remit on return to the home country. It appears that dramatic differences in cultures are particularly likely to precipitate such a psychotic episode (e.g., a rural Asian refugee placed in an urban US setting). In addition, certain destinations, such as Jerusalem or Machu Picchu, seem to put certain people at risk for the development of psychotic behavior.

Box 17.3 Antares/CDC mental health support recommendations for humanitarian organizations

1. An agency needs a written and active policy to prevent or mitigate the effects of stress.
2. There should be systematic screening and assessment of the capacity of personnel to respond to and cope with anticipated stresses of a position or contract.
3. All staff should have appropriate pre-assignment preparation and training in managing stress.
4. Staff response to stress should be monitored on an ongoing basis.
5. There must be provision for training and support on an ongoing basis to help staff deal with daily stresses.
6. There should be specific and culturally appropriate support in the wake of dramatic incidents and other unexpected periods of stress.
7. There should be practical emotional and culturally appropriate support for staff at the end of an assignment or contract.
8. There must be a clear understanding and written policies with respect to the ongoing support offered to staff who have been adversely impacted by exposure to stress and trauma during an assignment.

(From the Antares Foundation, Managing Stress in Humanitarian Workers: Guidelines for Good Practices.)

THE ROLE OF THE CLINICIAN: ORGANIZING SUPPORT

Mental Health Support for Humanitarian and Other Overseas Workers

The Centers for Disease Control and Prevention (CDC) and the Antares Foundation have recently released updated standards for mental health support for humanitarian workers (see [Box 17.3](#)). Medical providers who support humanitarian workers should familiarize themselves with these standards and, where appropriate, make sure that such workers have access to preparation that helps them understand the nature of their assignment, common reactions, and where to go for psychological help when it is needed. The standards also document the need for a good plan for support during deployment as well as information on issues of repatriation and adjustment on return. Although these recommendations target humanitarian organizations, they also represent best practices for those responsible for the care of any people being deployed to difficult assignments.

For certain high-risk groups, such as journalists, humanitarian workers in war zones, and diplomatic and military personnel who have been in violent areas, some sort of debriefing is increasingly seen to be necessary. Although the older types of psychological debriefing have been discredited as ineffective or even harmful (i.e., those involving emotional catharsis and universally administered protocol), an educationally oriented debriefing individually or with a small group of peers can be helpful. Such debriefings normally involve allowing the traveler to discuss whatever aspects of the trip were of special importance or concern to them, followed by information on repatriation, description of commonly occurring psychological and adjustment issues, and guidance as to where to get help if needed. Even a brief medical debriefing/outbriefing with travelers who are at risk can be very helpful with adjustment, and early attention is crucial to reducing the risk of emerging mental health problems.

INTERNET RESOURCES

http://www.who.int/ith/other_health_risks/psychological_health/en/

<http://www.antaressfoundation.org/guidelines#.VVJXyfm-UZg>

<http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-2-the-pre-travel-consultation/mental-health-and-travel>

<http://www.nctsn.org/content/psychological-first-aid>

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