International travel and health

Module 5: Mental, neurological and substance use conditions
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Foreword

Depending on the health profile of the traveller, the type of travel to be undertaken, and the place of transit and destination, travellers may face various health risks during travel. The *International travel and health* is an update of *International travel and health (2012)* and serves as an entry point for other World Health Organization (WHO) publications that provide further information. Its primary target audience is travel health practitioners and travel health professionals, who provide health advice to travellers on appropriate precautions to be taken to minimize any travel-related health risks in unfamiliar environments, before, during and after travel. The guidance may also be of interest to health authorities who intend to support travel health professionals in their jurisdiction or develop health advice for their population. It may also be of interest to travellers who wish to obtain such information for themselves as well as those working in the travel industry, such as agents and organizers, airlines and shipping companies.

Module 5 lays out the various aspects relevant to mental, neurological and substance use (MNS) conditions that travel health practitioners should be aware of when supporting travellers, or people with these conditions who are considering travelling. International travel can be a stressful experience. Travellers may face separation from family and familiar social support systems as well as having to adjust to foreign cultures and languages. Coping with high levels of stress may result in physical, social and psychological problems. Changes to the circadian rhythm and sleep deprivation can trigger seizures in people with epilepsy, provoke migraine attacks and exacerbate behavioural symptoms in people living with dementia. Under the stress of travel, pre-existing MNS conditions may be exacerbated or become apparent for the first time.
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Module 5: Mental, neurological and substance use (MNS) conditions

1. General considerations

• International travel can be a stressful experience because travellers may:
  » face separation from family and familiar social support systems;
  » have to adjust to new contexts, including foreign cultures and languages;
  » encounter unfamiliar or stressful situations and challenges.

• Coping with high levels of stress may result in physical, social and psychological problems:
  » For example, unexpected changes to the travel itinerary or problems with the travel process can cause significant distress for most people.
  » Under the stress of travel, pre-existing MNS conditions may be exacerbated or become apparent for the first time.
  » For example, changes to the circadian rhythm and sleep deprivation can trigger seizures in people with epilepsy or relapse in people with bipolar disorder, provoke migraine attacks and exacerbate behavioural symptoms in people living with dementia.
  » It is important to note that not everyone who experiences distress prior to or during travel has an MNS condition.

• The MNS health care infrastructures may differ both within and between countries. This may affect:
  » facilities and availability of trained staff;
  » type and quality of interventions;
  » understanding of cultural background of the traveller; and
  » ability to communicate, because of language barriers.

• The legal environment related to mental health may also vary widely. For example:
  » Laws dealing with the regulation of psychoactive and controlled substances and psychotropic medications vary considerably.
  » Laws in relation to detention or involuntary admission to hospital may differ considerably from those of the country of departure.
  » In some countries, self-harm and suicide are criminalized.

• As a result of the differences in the infrastructures and legal systems described above, a health care provider supporting someone in an emergency situation may have to decide whether the traveller’s care can be managed at the travel destination or whether the traveller requires repatriation.

• Travel insurance may not cover MNS care or services, for example for:
  » mental health emergencies, or
  » treatment for problems arising from drugs or alcohol use.
Box 1: Doing what matters in times of stress

Doing what matters in times of stress: an illustrated guide is a stress management guide for coping with adversity, including the stress of travel. The guide aims to equip people with practical skills to help cope with stress. A few minutes each day are enough to practice the self-help techniques. The guide can be used alone or with the accompanying audio exercises.

Informed by evidence and extensive field testing, the guide is for anyone who experiences stress, wherever they live and whatever their circumstances.

The guide has been translated into around 30 languages and the audio is available in 13 languages.

The guide can also be downloaded at: https://apps.who.int/iris/handle/10665/331901

Box 2: Important note to health care providers!!

While providing care for MNS conditions, health care providers should remain aware of – and ensure protection of, and respect for – the rights of people living with these conditions, in keeping with international covenants and national laws. WHO’s QualityRights initiative aims to improve the quality of care in mental health and related services and to promote the rights of people with psychosocial, intellectual and cognitive disabilities.

The associated QualityRights e-training, available in 11 languages, covers: taking care of one’s own mental health; supporting friends, family and colleagues with their mental health; tackling stigma, discrimination, abuse and coercion in mental health services; and taking action in support of transformation of mental health services towards a person-centred, rights-based recovery approach. QualityRights e-training can be accessed here: https://www.who.int/teams/mental-health-and-substance-use/policy-law-rights/qr-e-training.
2. Before travel

- Information gathering before travel may help to reduce travel-related stress. Such information includes:
  - the mode of travel (air, land or sea);
  - the duration of travel;
  - characteristics of the destination;
  - expected difficulties;
  - coping methods to maintain self-confidence and manage stress (see Box 1); and
  - available MNS services at the travel destination, including for potential emergency situations.
- A pre-travel consultation should include enquiry into a person’s MNS history or treatment.
- Travellers with a significant history of MNS conditions should receive specific health advice (see below).
- Those receiving ongoing treatment, including using psychotropic medication (sometimes under international control) for a MNS condition, should be advised to continue to adhere to their treatment plan while travelling.

### Box 3: Caution!

In certain countries it is a criminal offence to carry certain psychotropic medications (for example, benzodiazepines) without proof of prescription.

It is thus highly advisable that travellers carry:

- a letter from a physician certifying the need for medicine or other medical items, or both; as well as
- documents concerning their clinical conditions and details about treatment, such as copies of prescriptions.

All these documents should ideally be in a language that is understood in the country of travel.

- Precautions are also necessary when providing treatment for travel-related health concerns for a person with a history of an MNS condition.
- For example, the use of mefloquine for malaria prophylaxis is contraindicated in people who have:
  - hypersensitivity to mefloquine;
  - MNS conditions (for example, depression or epilepsy);
  - a history of a severe MNS condition (such as psychosis);
  - concomitant halofantrine treatment;
  - had treatment with mefloquine in the previous 4 weeks.

The following sections provide brief descriptions of certain MNS conditions and include travel-related advice where relevant.
3. Mental health conditions and travel

3.1 Anxiety disorders

Anxiety disorders are characterized by excessive fear and worry and related behavioural disturbances. Symptoms are severe enough to result in significant distress or impairment in functioning. There are several different kinds of anxiety disorders, such as: generalized anxiety disorder (characterized by excessive worry), panic disorder (characterized by panic attacks), social anxiety disorder (characterized by excessive fear and worry in social situations), separation anxiety disorder (characterized by excessive fear or anxiety about separation from those individuals with whom the person has a deep emotional bond) and others. Effective psychological treatments exists and, depending on the age of the affected person and the severity of the disorder, medication may also be considered. Health providers can offer specific travel advice for people with anxiety disorders:

3.1.1 Panic attacks

- **Panic attacks can mimic other health conditions and are characterized** by an abrupt onset of intense anxiety with concomitant signs and symptoms of autonomic hyperactivity. The attack usually peaks within 10 minutes, sometimes more quickly, and may last for up to 30 minutes or more.
- **The following associated symptoms of panic may be present during a panic attack:**
  - shortness of breath
  - chest pain
  - choking
  - nausea
  - derealization
  - fear of dying.
- **Panic attack may occur:**
  - as part of a panic disorder;
  - as a result of psychoactive substance use, such as during cannabis or psychostimulant intoxication; and
  - during or following periods of increasingly stressful life events including events that may occur during or be related to travelling.

3.1.2 Generalized anxiety disorder (GAD)

- GAD is characterized by excessive worry and tension about everyday events that is difficult to control and persistent, usually lasting at least 6 months or more.
- Travel is unlikely to be a key determinant of the development of GAD but could trigger a worsening of symptoms in some individuals who become preoccupied with worries in the lead-up to or during travel.
3.1.3 **Social anxiety disorder**
- Social anxiety disorder may manifest as fear of judgement or embarrassment in social situations.
- Interactions with unfamiliar people or navigating new environments while travelling can be particularly stressful for someone experiencing social anxiety disorder.

3.1.4 **Specific phobias**
- Specific phobias are a type of anxiety disorder characterized by an intense, irrational fear of a specific object, situation or activity. These fears can cause significant distress and interference with daily life.
- Specific phobias, such as fear of flying or fear of crowded places, can significantly impede travel plans and functioning during travel.

**Anxiety disorders and travel**
Caffeine, psychoactive substances and even some over-the-counter medications used during travel can cause symptoms of anxiety that can resemble anxiety disorders. Additionally, stress during travel can lead to certain anxiety-related problems (for example, panic attacks) or worsen symptoms of some anxiety disorders. For people currently seeking treatment for an anxiety disorder and planning to travel, access to their treating physician and/or maintenance of their current treatment regimens during travel should be discussed. Also, specific travel advice (see Box 7) can be given to support people with anxiety disorders in preparing for and during travel.

3.2 **Depression**
Depressive disorder (also known as depression) is a common mental disorder. Depression is different from regular mood changes and feelings about everyday life. It can affect all aspects of life, including relationships with family, friends and community. It can result from or lead to problems at school and at work. Depression can happen to anyone. Uncommon but serious problems associated with depression are the risk of suicide or self-harm (see section 3.3). A minority of people with depression may have psychotic features, such as delusions or hallucinations. Depressive episodes may occur as single episodes, as recurrent episodes or as part of bipolar affective disorder (see section 3.5).

**Depression is characterized by:**
- persistent low mood;
- reduced capacity for enjoyment (anhedonia) over a number of weeks.

**People who are depressed also experience several of the following symptoms**
- difficulty sleeping;
- reduction of energy and fatigue;
- disturbed sleep or sleeping too much;
- changes in appetite and weight (increase or decrease);
- feelings of excessive guilt or low self-worth
- hopelessness about the future;
- thoughts about dying or suicide;
- poor concentration.
Depression and travel

The stress of travel, isolation from family and familiar social support systems, and reactions to a foreign culture and language may all contribute to difficulty adjusting, and in some cases can increase the risk of depressive disorders. For people currently seeking treatment for depression and planning to travel, access to their treating physician or maintenance of their current treatment regimens during the travel should be discussed (see Box 6 mhGAP Intervention Guide module on depression). Also, specific travel advice (see Box 7) can be given to support people with depression in preparing for and during travel.

Further information


3.3 Self-harm and suicidal behaviour

Suicide is the act of deliberately killing oneself. Self-harm is a broader term referring to intentional self-inflicted poisoning or injury, which may or may not have a fatal intent or outcome. Every suicide is a tragedy that affects families, communities and entire countries and has long-lasting effects on the people left behind.

- Suicide is a serious public health problem; however, suicides are preventable with timely, evidence-based and often low-cost interventions.¹
- There is an established link between suicide and mental health conditions (in particular, depression and alcohol use disorders), particularly in high-income countries.
- However, many suicides happen impulsively in moments of crisis when someone feels unable to deal with life stresses, such as financial problems, relationship break-up, or chronic pain and illness.
- Also, suicide risk is higher in persons experiencing conflict, disaster, violence, abuse, or loss and a sense of isolation.
- Suicide rates are also high among vulnerable groups who experience discrimination, such as refugees and migrants; indigenous peoples; lesbian, gay, bisexual, transgender, intersex people.

Travel and prevention of suicide/self-harm

Certain aspects of travel may exacerbate underlying factors that may contribute to suicidal behaviours in vulnerable individuals, such as disrupted routines, increased stress, feelings of isolation and being in unfamiliar environments. If there is concern about suicidal behaviour or the individual intending to travel has a history of a mental health condition(s) or self-harm, acute emotional distress or chronic pain, access to their treating physician or other health professional and psychosocial support should be discussed (see Box 5 on resources to support suicide prevention and Box 6 mhGAP Intervention Guide module on suicide/self-harm). Also, specific travel advice (see Box 7) can be given to support people at risk of suicide/self-harm in preparing for and during travel.

Suicide and suicide attempts remain illegal in civil and criminal law in at least 23 countries.\(^3\,^4\) Travellers should be made aware that in these countries there are legal consequences for suicidal behaviour and legal assistance may be needed, in addition to professional health support. The threat of legal sanction as well as actual imprisonment can have negative repercussions on an individual’s mental health as well as exacerbate suicide risk, leaving those who are incarcerated even more vulnerable.

**Box 4: Resources to support suicide prevention**

- See also mhGAP Box 6.

**Further information**


### 3.4 Conditions related to stress

Most people feel fear or horror during or after witnessing or experiencing a potentially traumatic event, such as war or other violence, accidents or natural disasters. Most people exposed to such events will experience distress, but will recover with time. However, a minority will continue to experience severe stress reactions, and, in some cases, these may persist for months or even years after the experience. Affected individuals may develop a range of mental health conditions, including posttraumatic stress disorder (PTSD), depressive disorders, anxiety disorders and substance use disorders. An estimated 3.9% of the world’s population has had PTSD.

#### Conditions related to stress and travel

##### 3.4.1 Acute stress reaction

The term “acute stress reaction” refers to the development of transient emotional, somatic, cognitive or behavioural symptoms as a result of exposure to an event or situation of an extremely threatening or horrific nature (for example, natural or human-made disasters).

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\(^3\) Countries known to criminalize suicide and suicide attempts: Bahamas, Bangladesh, Brunei Darussalam, Gambia, Grenada, Jordan, Kenya, Malawi, Maldives, Myanmar, Nigeria, Papua New Guinea, Qatar, Saint Lucia, Saudi Arabia, Sierra Leone, Somalia, South Sudan, Sudan, Tonga, Uganda, United Arab Emirates, United Republic of Tanzania.

Symptoms may include signs of anxiety (for example, tachycardia, sweating and flushing), being in a daze, confusion, sadness, anxiety, anger, despair and social withdrawal, among others.

Acute stress reactions can occur during travel when someone is exposed to a potentially traumatic event. If a person demonstrates acute stress reactions after an adverse experience, this does not mean they are experiencing a mental disorder. Many of these reactions are normal and may dissipate within a few days after the event and re-establishment the person’s safety.
3. Mental health conditions and travel

3.4.2 PTSD

PTSD is a condition that can develop in response to experiencing a traumatic event. It includes specific set of symptoms, such as re-experiencing the traumatic event through intrusive images or “flashbacks”, repetitive nightmares, or other emotional or physical experiences; deliberate avoidance of reminders of the traumatic event and having a heightened sense of vigilance or threat in many situations. These experiences interfere with daily activities and impair family, social and school or working life, in addition to being very distressing for the affected person. PTSD may also occur during or after travel when someone is exposed to a potentially traumatic event.

Effective psychological treatments do exist and are best administered by a trained and supervised health worker or a mental health professional. For people currently seeking treatment for PTSD and planning to travel, access to their treating physician and/or maintenance of their current treatment regimens during the travel should be discussed (see Box 5 mhGAP Humanitarian Intervention Guide module on PTSD). Also, specific travel advice (see Box 6) can be given to support people in preparing for and during travel.

Further information

WHO publications


3.5 Psychoses

Psychoses are characterized by distorted thoughts and perceptions, as well as disturbed emotions and behaviours. These can include:

- marked behavioural changes;
- neglecting usual responsibilities related to work, school, domestic or social activities;
- agitated, aggressive behaviour;
- decreased or increased activity;
- fixed false beliefs not shared by others in the person’s culture;
- hearing voices or seeing things that are not there; and
- lack of realization that one is experiencing a mental health problem.

Psychosis may occur in the context of different mental health conditions, including:

- acute and transient psychotic episodes;
- bipolar disorder;
- schizophrenia;
- depression; and
- during or following use of certain psychoactive substances.

3.5.1 Acute and transient psychotic episodes

There is some evidence that stress may impact acute and transient episodes of psychosis. It is possible that the isolation of long-distance travel, psychoactive substance use, irregular food and fluid intake, and sleep disturbance may contribute to this risk in travellers who are susceptible. These episodes can be short-lived or can be an early sign of a more serious condition.
3.5.2 Bipolar disorder

Bipolar disorder is a chronic mental health condition characterized by mood swings from one extreme to another. During a manic episode, a person experiences an extremely high mood with lots of energy (feeling very happy, excited, overactive). They may have a sense of euphoria or an excess of emotion (uncontrollable laughing or crying). They may feel much more irritable, agitated or restless than usual.

In manic episodes, the changes in mood and activities are accompanied by other characteristic symptoms, which may include:

• Grandiose or highly inflated sense of self-worth;
• talking quickly and rapidly shifting from one idea to the next;
• having trouble concentrating and being easily distracted;
• not feeling like eating or sleeping;
• rapid and often exaggerated changes in moods;
• having psychotic symptoms such as hearing things that are not there or having fixed erroneous beliefs; and
• reckless or risk-taking behaviour, for example by overspending, risky sexual activity, drinking, or harming oneself or others.

During a depressive episode, a person experiences a depressed mood (feeling sad, irritable, empty). They may feel a loss of interest or pleasure in activities they previously enjoyed.

Other symptoms are also present, which may include:

• poor concentration
• feelings of excessive guilt or low self-worth
• hopelessness about the future
• thoughts about dying or suicide
• disrupted sleep
• changes in appetite or weight
• feeling very tired or low in energy.

A depressive episode is different from mood fluctuations commonly experienced by most people, in that the symptoms last most of the day, nearly every day, for at least two weeks.

Both manic and depressive episodes can cause significant difficulties in all aspects of life, including at home, work and school. They may require specialized care or even hospitalization to prevent the person harm to themselves or others.

Mania may pose an emergency overseas. It is not uncommon for travellers to have initiated a trip while in a manic state. Changes in routine, disrupted sleep patterns impacting circadian rhythms that play a key role in bipolar disorder, and the stress associated with travel can have an influence on individuals with bipolar disorder. The excitement, stimulation and unpredictability of travel may also play a role in triggering manic episodes. Use of psychoactive substances during travel can also lead to or contribute to relapse in a person with bipolar disorder.

It is important for individuals with bipolar disorder to be aware of potential triggers and to take proactive measures to manage their mental health during travel. This may include maintaining a consistent sleep schedule, adhering to treatment and medication regimens, and having a support system in place.
3.5.3 Schizophrenia

Schizophrenia is a severe mental health condition that often begins in late adolescence or the early twenties and is characterized by significant impairments in the way reality is perceived, and changes in behaviour related to:

- persistent delusions: the person has fixed beliefs that something is true, despite evidence to the contrary;
- persistent hallucinations: the person may hear, smell, see, touch or feel things that are not there;
- experiences of influence, control or passivity: the experience that one’s feelings, impulses, actions or thoughts are not generated by oneself, are being placed in one’s mind or withdrawn from one’s mind by others, or that one’s thoughts are being broadcast to others;
- disorganized thinking, which is often observed as jumbled or irrelevant speech;
- highly disorganized behaviour: for example, the person does things that appear bizarre or purposeless, or the person has unpredictable or inappropriate emotional responses that interfere with their ability to organize their behaviour;
- “negative symptoms” such as very limited speech, restricted experience and expression of emotions, inability to experience interest or pleasure, and social withdrawal; and/or
- extreme agitation or slowing of movements, maintenance of unusual postures.

People with schizophrenia often also experience persistent difficulties with their cognitive or thinking skills, such as memory, attention and problem-solving. Given the chronic nature of the disorder and the relatively early age of onset, it is unlikely that travel in itself can be considered a risk factor for its development. However, the stress and changes in routine associated with travel can be factors that lead to exacerbation of symptoms or to relapse in people with schizophrenia.

Psychoses and travel

People living with psychoses often experience particular stigma that will also be present during travel. Certain factors that support mental health and well-being may be disrupted during travel and lead to relapse in people with pre-existing psychoses. For example, disruptions to daily routines, social support networks, and medication or treatment regimens can occur during travel and increase risk of relapse. For people planning to travel who are currently seeking treatment for psychoses or with a history of psychoses, access to their treating physician and/or maintenance of their current treatment regimens during the travel should be discussed (see Box 6 mhGAP Intervention Guide module on psychoses). Also, specific travel advice (see Box 7) can be given to support people in preparing for and during travel. It can also be useful to have a plan in place for being able to contact and access specialized medical and mental health services during travel, if needed.

Further information

3.6  Mental health conditions in children and young people

Childhood and adolescence are crucial periods for developing the social and emotional habits important for mental well-being. These include adopting healthy sleep patterns; exercising regularly; developing coping, problem-solving and interpersonal skills; and learning to manage emotions. Protective and supportive environments in the family, at school and in the wider community are also important.

3.6.1  Emotional disorders

Emotional disorders are common among adolescents. Anxiety disorders (which may involve panic or excessive worry) are the most prevalent in this age group and are more common among older than among younger adolescents. It is estimated that 3.6% of 10–14-year-olds and 4.6% of 15–19-year-olds experience an anxiety disorder. Depression is estimated to occur among 1.1% of adolescents aged 10–14 years, and 2.8% of 15–19-year-olds. Depression and anxiety share some of the same symptoms, including rapid and unexpected changes in mood. Depression can lead to suicide.

3.6.2  Behavioural disorders

Behavioural disorders are more common among younger adolescents than older adolescents. Attention deficit hyperactivity disorder (ADHD), characterized by difficulty in paying attention, excessive activity and acting without regard to consequences, occurs among 3.1% of 10–14-year-olds and 2.4% of 15–19-year-olds (Institute of health Metrics and Evaluation, undated). Conduct disorder (involving symptoms of destructive or challenging behaviour) occurs among 3.6% of 10–14-year-olds and 2.4% of 15–19-year-olds (Institute of health Metrics and Evaluation, undated). Behavioural disorders can affect adolescents’ education and conduct disorder may result in criminal behaviour.

3.6.3  Eating disorders

Eating disorders, such as anorexia nervosa and bulimia nervosa, commonly emerge during adolescence and young adulthood. Eating disorders involve abnormal eating behaviour and a preoccupation with food, accompanied in most instances by concerns about body weight and shape. Anorexia nervosa can lead to premature death, often due to medical complications or suicide, and has higher mortality than any other mental disorder.

3.6.4  Risk-taking behaviours

Many risk-taking behaviours affecting health, such as substance use or sexual risk-taking, start during adolescence and can occur during travel. Risk-taking behaviours can be an unhelpful strategy to cope with emotional difficulties and can severely impact an adolescent’s mental and physical well-being. Worldwide, the prevalence of heavy episodic drinking among adolescents aged 15–19 years was 13.6% in 2016, with males most at risk (WHO, 2018). The use of tobacco and cannabis are additional concerns. Many adult smokers had their first cigarette before the age of 18 years. Cannabis is the most widely used drug among young people with about 4.7% of 15–16-years-olds using it at least once in 2018 (UNODC, 2020).

Tips for travel

Children and young people with emotional and behavioural problems are likely to experience stress during travel. Several strategies for travel can be recommended by health care providers to support both children and young people and their caregivers in the travel process:
3. Mental health conditions and travel

- **Plan ahead**: Preparation is key. Caregivers should be advised to research the destination thoroughly, including accommodation, activities and amenities that can accommodate their child’s needs.

- **Communicate**: Communication about travel with children and young people, including young children, is recommended using language appropriate to age and development. For young children, this can include reading relevant story books, using pretend play and other age-appropriate methods for preparing for travel.

- **Stick to routines**: Maintaining familiar routines as much as possible during travel can be useful. Consistency can help children and young people feel more secure and stable, reducing emotional and behavioural issues.

- **Pack comfort items**: Caregivers can be advised to develop a travel kit that includes comfort items, such as favourite toys, blankets or stuffed animals. Having these familiar objects can help ease anxiety and provide a sense of security in unfamiliar surroundings.

- **Stay flexible**: While routines are important, it is also essential to remain flexible during travel. It can be useful to advise caregivers to have contingency plans in place to be prepared for unexpected changes.

- **Use tools**: Aids such as schedules, maps and picture cards can help children and young people understand what to expect during the trip and alleviate anxiety about unfamiliar environments.

- **Take breaks**: Health care providers can advise parents and caregivers to plan regular breaks during travel to give time to rest and recharge and to allow opportunities for physical activity and play to help release energy and reduce stress.

- **Be patient and supportive**: Travelling can be overwhelming for children with emotional and behavioural problems. Health care providers should emphasize the importance of practising patience and offering plenty of reassurance throughout the journey.

- **Seek professional advice**: For children or young people with ongoing emotional or behavioural problems, providers can consider seeking advice from a therapist, counsellor or health care provider who specializes in working with children with emotional and behavioural challenges.

**References**


**Further information**

Box 6: Considerations for providers of travel advice for people with mental health conditions

Several measures can support people living with mental health conditions in planning for and during travel.

- Encourage thorough planning of the trip prior to departure, including plans for ensuring continuity of care and access to psychotropic medications, if prescribed.
- Emphasize the importance of maintaining a healthy lifestyle during travel, including engaging in physical activity, maintaining regular sleep patterns and eating a balanced diet.
- Encourage the use of relaxation techniques, such as deep breathing exercises, to cope with feelings of anxiety en route or during travel.
- Encourage methods to maintain social networks and social support (e.g. keeping in touch with supportive friends and family).
- Promote open discussion during health care visits prior to travel so people can share fears and concerns related to travel and solve specific problems.
- For people with severe mental health conditions or greatly impaired functioning, support the person to create a support network of caregivers, family, friends or travel companions who can offer assistance and support during the journey.
4. Neurological conditions

4.1 Neuro-infectious diseases

The risks of contracting infections that affect the nervous system can be higher in certain regions of the world. Travellers should be well informed about the recommended vaccinations and prophylactic medications (for example, against malaria) for their specific travel destination. Travellers should be advised to seek appropriate medical care immediately if they suspect that they might have a neurological infection or emergency.

- **Zika virus** is transmitted primarily by Aedes mosquitoes, which bite mostly during the day. Most people with Zika virus infection do not develop symptoms; those who do typically have symptoms including rash, fever, conjunctivitis, muscle and joint pain, malaise and headache that last for 2–7 days. Zika virus infection during pregnancy can cause infants to be born with microcephaly and other congenital malformations as well as causing preterm birth and miscarriage. Zika virus infection is associated with Guillain-Barré syndrome, neuropathy and myelitis in adults and children.

**Further information**


- **Japanese encephalitis virus (JEV)** is a flavivirus related to dengue, yellow fever and West Nile viruses, and is spread by mosquitoes. JEV is the main cause of viral encephalitis in many countries of Asia where it is responsible for an estimated 68 000 clinical cases every year. Although symptomatic Japanese encephalitis (JE) is rare, the case-fatality rate among those with encephalitis can be as high as 30%. Permanent neurological or psychiatric sequelae can occur in 30–50% of people infected with encephalitis. There is no cure for the disease. Treatment is focused on relieving severe clinical signs and supporting the patient to overcome the infection. Safe and effective vaccines are available to prevent JE.

**Further information**


- **West Nile Virus (WNV)** is a member of the flavivirus genus and belongs to the JE antigenic complex of the family Flaviviridae. WNV can cause neurological disease and death. However, approximately 80% of people who are infected will not show any symptoms. WNV is commonly found in Africa, Europe, the Middle East, North America and West Asia. The virus is maintained in nature in a cycle involving transmission between birds and mosquitoes. Humans, horses and other mammals can be infected. WNV is mainly transmitted to people through the bites of infected mosquitoes. The virus can cause severe disease and death in horses. Vaccines are available for use in horses but are not yet available for people.
Further information

• Meningitis is a clinical syndrome marked by the presence of meningeal inflammation, predominantly caused by infectious agents, including bacteria, viruses, fungi and protozoa. Acute bacterial meningitis is a medical emergency and remains a public health challenge in resource-limited settings. The most common causes of community-acquired acute bacterial meningitis are *Streptococcus pneumoniae*, *Neisseria meningitidis* and *Haemophilus influenzae* type b. *Streptococcus agalactiae* is the primary causative agent in newborns. Acute bacterial meningitis can present as a sporadic or epidemic disease, depending on the causative agent and the geographical setting. For example, *N. meningitidis* is a human pathogen primarily transmitted through respiratory droplets that accounts for recurrent epidemics in the African meningitis belt region during the dry season as well as sporadic cases and small-scale outbreaks in other temperate and subtropical areas. Safe and effective vaccines are available to prevent the main causes of acute bacterial meningitis.

Further information

4.2 Neurological emergencies

4.2.1 Seizures
Seizure episodes are a result of excessive electrical discharges in a group of brain cells. Different parts of the brain can be the site of such discharges. Seizures can vary from the briefest lapses of attention or muscle jerks to severe and prolonged convulsions. Seizures can also vary in frequency, from less than one per year to several per day. Seizure triggers include changes in sleep patterns, jetlag and lack of sleep such as can happen with travel and alcohol and drug use. It is important that travellers bring enough medication with them in their hand luggage in case of unexpected travel diversions or lost luggage. It is crucial that medications are taken as prescribed, as missing a dose can result in a seizure. It is also advised for travellers to carry abortive anti-seizure medication, but they should be aware that some of these medications could be controlled in certain countries.

4.2.2 Guillain-Barré syndrome (GBS)
GBS is a rare condition in which a person’s immune system attacks the peripheral nerves. People of all ages can be affected, but it is more common in adults and in males. Most people recover fully from even the most severe cases of GBS. Severe cases are rare but can result in near-total paralysis and breathing problems. GBS is potentially life-threatening. The first symptoms include weakness or tingling sensations. They usually start in the legs and can spread to the arms and face. For some people, these symptoms can lead to ascending paralysis of the legs, arms or muscles in the face. In approximately one third of people, the chest muscles are affected, making it hard to breathe. Therefore, people with GBS should be treated and monitored as quickly as possible; some may need intensive care. Treatment includes supportive care and some immunological therapies.
4. Neurological conditions

4.2.3 Stroke

Stroke is the leading cause of disability worldwide and the second leading cause of death. One of the main clinical risk factors for stroke is a high blood pressure. Others include tobacco use, physical inactivity, unhealthy diet, use of alcohol, atrial fibrillation, raised blood lipid levels, obesity, genetic disposition, stress and depression. Stroke survivors may live with impacts which include physical disability, communication difficulties, and loss of work, income and social networks.

The key signs of stroke are facial drooping, arm weakness on one side, and speech difficulties – slurring or not making sense. People may also experience changes in their vision as well as loss of balance or dizziness. Knowing the signs of stroke and seeking immediate emergency medical care can save lives and improve the outcome for survivors.

Further information


4.3 Chronic neurological conditions

4.3.1 Migraine

Migraine most often begins at puberty and mainly affects people aged between 35 and 45 years. It is more common in women, usually by a factor of about 2:1, because of hormonal influences. Migraine is recurrent, often lifelong and characterized by recurring attacks which typically include one-sided, pulsating headache, which is aggravated by routine physical activity, noise, bright lights and is accompanied by nausea. Many people find that travel exacerbates their migraines due to sleep pattern alterations, eating disruptions, alcohol consumption and time-zone changes. Travellers should continue to take their prophylactic migraine medications and bring enough doses of their abortive treatment, which is most effective when taken quickly with the onset of migraine or migraine aura. Some migraineurs
take a prophylactic nonsteroid anti-inflammatory drug (NSAID) prior to flying to prevent migraine from developing. Adequate hydration can also help prevent migraines from developing during travel.

Further information

4.3.2 Parkinson disease (PD)
PD is a brain condition that causes problems with movement, mental health and sleep, and is associated with pain and other health issues. PD results in high rates of disability and the need for care. Many people with PD also develop dementia. The disease usually occurs in older people, but younger people can also be affected. Men are affected more often than women. Levodopa/carbidopa, a combination medicine that increases the amount of dopamine in the brain, is the most common medication for PD. Doctors may use other medicines such as anticholinergics to reduce involuntary muscle movement. When travelling, people with PD should bring ample supplies of their medications as these may not be available at their destination. It is advisable to leave plenty of time for travel logistics such as changing planes as people with PD often have slower movements and thus longer transit times. In addition, some people with PD also develop cognitive impairment; therefore, guidance provided under section 4.3.4 of this document also applies.

Further information

4.3.4 Dementia or cognitive impairment
Dementia is a syndrome that can be caused by a number of diseases which, over time, destroy nerve cells and damage the brain. This typically leads to a deterioration in cognitive function (i.e. the ability to process thought) beyond what might be expected from the usual consequences of biological ageing. While consciousness is not affected, the impairment in cognitive function is commonly accompanied, and occasionally preceded, by changes in mood, emotional control, behaviour or motivation. As a result of changes in daily routine, unfamiliarity with new places, time-zone changes and lack of sleep, travel can result in heightened levels of confusion and stress for the person living with dementia, increasing the likelihood of their getting lost, experiencing delirium and exacerbating cognitive difficulties.

Further information
Box 7: Travelling with dementia

Travel may have psychosocial benefits in people living with mild to moderate dementia; however, travelling can pose increased risks for those with advanced dementia – a thoughtful weighing up of the risks and benefits should be undertaken and discussed with caregivers.

For those diagnosed with dementia who wish to travel, there are things that can help manage symptoms:

- **Plan ahead:**
  - Have a travel companion (family member, friend or professional).
  - Review destination maps ahead of time to identify key places of interest, including accommodation, airport, pharmacy and hospital.
  - Create a card with important information such as the accommodation address, emergency numbers, medical travel insurance and important medical details. Carry this card at all times during the trip.
  - Plan travel routes and the itinerary in advance.
  - Explore transportation options to get from place to place.
  - Make a list of essential medications and pack up-to-date medical information.

- **Try to keep to a daily routine.**

- **Travel during the time of day that is best for the person with dementia.**

- **If the person feels comfortable disclosing their diagnosis, it may be helpful for staff (on planes and trains, in restaurants, at the accommodation, etc) to be made aware that the person is living with dementia.**

- **If flying:**
  - Review the airport map, which could be helpful in utilizing airport support systems.
  - Note that there are some dementia-friendly airports (e.g. Heathrow, Schiphol) that provide additional support and have trained personnel who are experienced in supporting people living with dementia.
  - Stay hydrated. Dehydration resulting from low cabin humidity can increase the risk of confusion.
  - Consider using noise-cancelling earbuds or headsets (and playing relaxing music). When flying, passengers are exposed to harmful noises and busy environments, which could cause distress and create communication difficulties between the person and others (including caregivers).
  - To support navigation and mobility in the airport, consider requesting a wheelchair or motorized cart so that an airport employee is assigned to help the person get from place to place.

**Further information**

4.3.5 Neurodevelopmental conditions

Neurodevelopmental disorders (NDD) encompass behavioural and cognitive issues emerging during the developmental stages that lead to notable challenges in acquiring and performing specific intellectual, motor, language or social functions. The underlying causes of these disorders are often complex and frequently remain unidentified. Within the ICD-11 framework, NDD include diagnoses such as disorders of intellectual development, developmental speech or language disorders, autism spectrum disorder, developmental learning disorder, developmental motor coordination disorder and ADHD.

Travel and NDD

- Travelling can be challenging for children and adults with certain NDD, such as autism. The changes in routine, unpredictability, crowds, new noises and sights can all make the experience difficult for people with the NDD and their carers.
- Children and adults with NDDs may also face stigma during travel related to misunderstandings or discriminatory attitudes towards their behaviours or needs.
- It is important to advise people with NDDs and their carers to plan well in advance and have all the information needed for the journey easily accessible, either digitally, printed out or written down.
- Prior to travel, it can be useful to inform airlines or other travel carriers of the need for measures to be taken in advance of travel taking place, such as requesting priority boarding or specific seating. Medical providers can provide letters detailing the diagnosis and any measures that may be needed.
- In the lead-up to travel, it can also be helpful to recommend that people begin a pre-travel routine to gradually familiarize themselves with the planned travel. Trying to maintain routines as much as possible during travel can also be useful for maintaining self-regulation and comfort. Communication about travel with children and young people, including young children, is recommended, using language appropriate to age and development.
- Allowing extra time during travel can also help when dealing with unexpected challenges or delays. A provider can recommend the person with the NDD and anyone else involved in their travel plan to save plenty of time to allow for uncertainty.
- Trains, buses and airports can be very stimulating environments. Suggesting that the person with an NDD or their carer bring items that can support self-regulation is key. Examples include headphones, sunglasses, food and drink, which can reduce the risk of overstimulation.
- In some cases, a person with an NDD or their carer may wish to alert public transport workers and/or fellow passengers that they may need extra support, more time to process information, or additional considerations or measures. Lanyards, badges or information cards may be useful to convey this information throughout the journey and can be recommended for those concerned.

Further information

WHO documents:

4. Neurological conditions


Other sources:

5. Use of psychoactive substances and substance use disorders

Use of psychoactive substances (such as alcohol and psychoactive drugs) is linked to numerous health conditions. The harmful use of alcohol is a causal factor in more than 200 disease and injury conditions, and worldwide 3 million deaths every year result from harmful use of alcohol (representing about 5.3% of all deaths) (WHO, 2018). Drug use continues to be high worldwide. In 2021, 1 in every 17 people aged 15–64 years in the world had used a drug in the past 12 months. The estimated number of users grew from 240 million in 2011 to 296 million in 2021 (5.8% of the global population aged 15–64). This is a 23% increase, partly due to population growth (UNODC, 2023).

The use of psychoactive substances without medical supervision can lead to the development of substance use disorders (such as harmful patterns of substance use and substance dependence). Substance use disorders, particularly when untreated, increase morbidity and mortality risks for individuals, can trigger substantial suffering and lead to impairment in personal, family, social, educational, occupational or other important areas of functioning.

References


Further information

- Drugs (psychoactive) [overview]. Geneva: World Health Organization (https://www.who.int/health-topics/drugs-psychoactive#tab=tab_2).

5.1 Substance dependence

Dependence on psychoactive substances is characterized by:

- a strong internal drive to use a psychoactive substance, which manifests itself by:
  - impaired ability to control substance use;
  - increasing priority being given to substance use over other activities; and
  - persistence of use despite the occurrence of harm or negative consequences.

Physiological features of dependence may include:

- increased tolerance to the effects of the substance or a need to use increasing amounts of the substance to achieve the same effect;
• withdrawal symptoms following cessation of or reduction in the use of that substance; or
• repeated use of the substance or pharmacologically similar substances to prevent or alleviate withdrawal symptoms.

Substance dependence and travel
Travel is unlikely to be a key determinant of the development of substance dependence, but could trigger a relapse in individuals who are in remission, due to:

• being in new and sometimes exotic places;
• being freed from the familial and social restraints of home; and
• having easy access to cheap substances.

Travellers with substance dependence

• Cessation of the use of psychoactive substances can lead to withdrawal syndrome, which might require medical attention before or during travel.
• People with substance dependence may travel with psychoactive substances as part of their maintenance treatment.
  » For example, people with opioid dependence may be receiving treatment with opioid agonists (such as methadone or buprenorphine).
• Possession of a psychoactive substance might be illegal in a destination country and considered as serious crime. Travellers should therefore be cautious about carrying psychoactive substances and psychotropic medications, even if they use them under medical supervision.

5.2 Intoxication

Acute intoxication is:

• a dose-related transient condition that occurs following the intake of alcohol or another psychoactive substance resulting in disturbances in:
  » level of consciousness;
  » thought processes;
  » perception, affect, behaviour; or
  » psychophysiological functions.

Intoxication and emergency

• Alcohol intoxication (that is, drunkenness) alone rarely becomes a psychiatric emergency, unless the individual becomes violent or suicidal.
• Intoxication with stimulants, hallucinogens, phencyclidine, inhalants, and cannabis more commonly result in acute anxiety or psychotic states that may present as a psychiatric emergency.

5.3 Opioid overdose

Attention!

• Opioids can cause (due to their pharmacological effects)
  » breathing difficulties;
  » death.
• Three signs and symptoms of opioid overdose are:
  » pinpoint pupils;
  » unconsciousness;
  » difficulties with breathing.

• Death following opioid overdose is preventable if the person receives:
  » basic life support; and
  » timely administration of the medication naloxone (an antidote to opioids that reverses the effects of an opioid overdose if administered in time).

**Opioid overdose and travel**

According to WHO estimates, at least 120 000 people die due to opioid overdoses every year. While travelling, a person with opioid dependence can be exposed to opioids containing highly potent synthetic opioids such as fentanyl and its chemically similar analogues (including carfentanil, acetylfentanyl, butyrfentanyl and furanyl fentanyl), which have been associated with a spike in deaths from opioid overdose. There is evidence that drug dealers may be adding fentanyl to increase the potency of their products (such as heroin) and selling fentanyl as counterfeit tablets, created to look like authentic prescription medications. People using opioids while travelling might not realize that they have taken these highly dangerous substances leading to potentially lethal opioid overdose.

Although there are effective prevention and treatment interventions for opioid dependence and opioid overdoses, access to programmes is limited in most countries, while in some destination countries, they may be almost non-existent.

### 5.4 Withdrawal

**Withdrawal** is the experience of a set of symptoms following the abrupt cessation or reduction in dose of a psychoactive substance that has been consumed at high enough doses and for long enough for the person to be physically or mentally dependent on it.

**Management**

• Alcohol withdrawal requires medical assistance:
  » including pharmacological intervention with benzodiazepines such as diazepam.

• Concurrent medical conditions that might complicate diagnosis or management include:
  » Wernicke’s encephalopathy; and
  » the use of other substances.

• Treatment and support should continue after successful management of withdrawal syndrome to address alcohol dependence and comorbid health conditions.

**Withdrawal syndromes**

Withdrawal syndromes are essentially opposite to those that are produced by the psychoactive substance itself.

Withdrawal from alcohol, sedatives or hypnotics is usually characterized by:

• autonomic hyperactivity;
• tremors;
5. Use of psychoactive substances and substance use disorders

5.5 Screening, brief interventions and harm reduction for people using psychoactive substances

Even brief contact with a person using psychoactive substances offers the health care professional opportunities to provide a brief intervention or reduce harm associated with continuation of substance use.

The individual should be given:

- individualized feedback;
- advice about reducing or stopping the consumption of substances;
- information on how to obtain clean injecting equipment;
- information on safer sexual behaviour; and
- information on risk factors for accidental overdose.

They should also be offered the possibility of follow-up. Some people presenting with intoxication, and most people presenting with withdrawal, are likely to be dependent on the substance in question; they should be advised to obtain long-term treatment in their country of origin.

Box 8: Guide on self-help strategies for cutting down or stopping substance use

WHO has developed a guide on self-help strategies for cutting down or stopping substance use, which may be helpful for some people experiencing health, social, legal, psychological, work or family problems related to their substance use.

6. Other areas of concern

Acculturation difficulties

Travel often leads to encounters with new cultures, necessitating adjustment to different customs, lifestyle and languages. Adapting to the new culture is particularly important when travelling for a long period (such as during expatriation or migration). Major cultural change may evoke severe distress in some individuals. Individuals suddenly find themselves in a new culture in which they feel completely alien.

Reactive symptoms are understandable and include anxiety, depression, isolation, fear and a sense of loss of identity during the process of adjustment. Self-understanding, the passage of time and support from friends, family members and colleagues usually help to reduce the distress associated with adapting to new cultures and unfamiliar experiences. Distressed individuals who present to health professionals may be helped to understand that experiencing these reactions is natural and that distress will subside as they adapt to the new culture. Joining activities in the new community and actively trying to meet neighbours and co-workers may lessen culture shock.

Returning home may also be a challenge for people who have been travelling and living abroad for a prolonged period, especially if overseas travel has been particularly enjoyable or if their future life is expected to be less exciting and fulfilling. Some younger or long-term travellers may have a strong desire to remain within the new culture and dread returning home. In others, a sense of loss and bereavement may set in after the return, when travellers and their relatives realize that things have changed and that they have grown further apart as a result of their differing experiences. This may lead to feelings of surprise, frustration, confusion, anxiety and sadness. Sometimes friends and relatives may themselves be hurt and surprised by the reaction of those who have returned. Self-understanding and the ability to explain the situation may help all parties to restore healthy reactions and relationships.

Further information:

• Drugs [topic page]. Geneva: World Health Organization; undated (https://www.who.int/health-topics/drugs-psychoactive#tab=tab_1).
• Suicide prevention [topic page]. Geneva: World Health Organization; undated (https://www.who.int/health-topics/suicide#tab=tab_1).