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EDITORIAL

THE CHANGING FACE OF TRAVEL
RELATED MEDICINE

Between 1950 and 2000 the number of international arrivals grew from 25 million to 664 million. The increase continues apace with journeys more frequent and for shorter periods of time; the number of expatriate postings abroad is rising and changing immigration means that incoming migrant populations require health advice and interventions.

Diversification in tourism destinations has also taken place with Asia, North Africa, Latin America, and the Caribbean joining the more traditional destinations in popularity. This brings a rise in the number of people travelling to countries with high endemicity for various infectious and tropical diseases as well as environmental hazards. These changes increase the risk of importation of infectious disease.

In the UK one survey showed 67% of those visiting high-risk destinations did not seek health advice before travel. This finding has public-health significance, since the increasing number of travellers could potentially result in an increased incidence of travel-related disease and its importation. In a 1 month stay at a high risk destination, one in 300 travellers are infected with hepatitis A, one in 1250 travellers hepatitis B and up to eight in 1000 travellers are infected with malaria resulting in more than 10,000 malaria importations to Europe each year. The need for further education of health professionals and a global travellers interdisciplinary body, such as BTHA, is obvious.

This publication is one means of informing, educating and disseminating research findings to the membership. Its ability to do so depends on contributions from members and only a few have risen to this challenge. A viable, valuable journal requires articles, reviews, case histories and research reports. Put pen to paper or hit the keyboard and let us have your contributions now for the next issue. The journal offers an opportunity for the new author to test the waters and see his/her work in print.
TRANSMISSION OF INFECTION ON AIRCRAFT

M. CONNOR

Introduction
The transmission of infectious disease has had a long association with travel and mechanism of transport. The Black Death plague epidemic, which raced across Europe during 14th Century, was introduced by returning Italian soldiers, and resulted in the deaths of one third of the population of the continent. Ships that sailed around the world commonly reported outbreaks of infection including Yellow Fever, smallpox, cholera and plague. The duration of the journey was always greater than the incubation period of the most serious infectious diseases, and therefore, the illness would have manifested itself to other passengers, crew and the port health authorities on arrival. The arrival of the passenger aeroplane now makes it possible for individuals, with infectious diseases, to travel their journey well within the incubation period of many pathogenic organisms.

The transmission of infectious disease to passengers and crew of aircraft, during flight, has been a cause of concern to some groups within the aircraft industry. Large numbers of passengers, sitting for prolonged periods of time in close proximity, within a pressurized recirculated air-flow cabin environment, appear at first glance, to offer equation of ideal conditions for the spread of micro-organisms. However, the development of clinical infection is not a simple “passenger exposed to micro-organism equals infection”. There are a number of variables that require consideration before the risk of infection can be quantified:

• Type of organism and how infectious?
• Type of passengers and how susceptible to infectious organism?
• Mechanism of transmission of organism?
• Duration of flight?

What are the risks of infection transmission to passengers and crew? Does the recirculation of cabin air and use of High-Efficiency Particulate Air (HEPA) filters prevent transmission of infection? This review will attempt to determine what the main risks, if any, are. A number of infections have been transmitted on aircraft and these will be considered in detail.

INFECTIOUS DISEASES TRANSMITTED ON AIRCRAFT

Severe Acute Respiratory Syndrone (SARS)
Towards the end of 2002, reports from Southern China and Vietnam, were made of an unusually severe and contagious respiratory infection. Large numbers of individuals were affected, but in particular, large numbers of healthcare workers, who had been caring for patients. The infection quickly spread to Hong Kong, Singapore, Taiwan, Canada and the USA. Available laboratory diagnostic tests were negative, and the condition was named by the World
Health Organization (WHO) as Severe Acute Respiratory Syndrome (SARS)⁴. Virus culture and electron-microscopy eventually identified a new type of Coronavirus, previously unseen in humans, and probably of animal origin.

SARS was initially thought to be predominantly spread via the aerosol airborne route. This concern resulted in the frequent, and often inappropriate, use of protective facemasks, throughout many cities in south-east Asia. These concerns were heightened when large hospital outbreaks of SARS occurred in Hong Kong and Toronto, and the disease was appearing to be spread rapidly from affected countries to others, via passengers returning on aircraft⁴. The WHO issued an Emergency Travel Advisory notice on 15 March 2003 in an attempt to prevent international spread of SARS by increasing medical professional and public awareness of the symptoms, and enhancing surveillance of the infection⁵. A WHO Travel Update was issued on 27 March advising screening of passengers leaving affected areas, and a further WHO Travel Update on 2 Apr, advised against non-essential travel to Hong Kong and parts of China⁶.

Transmission of SARS infection on aircraft did occur during the outbreak⁶. A total of 4 separate flights, involving multiple passengers, were identified and followed up. Of these 4 incidents, 2 occurred before the WHO Travel Advisory notice issued on the 15 March, and the remaining 2 occurred during the following week. The WHO issued a number of recommendations to control SARS transmission on aircraft:

**Pre-flight control measures:**
- Any passenger or crew, with symptoms, should postpone travel until fully recovered.
- Airport screening measures for departing passengers from affected areas.
- Contacts of SARS patients should not undertake air travel for 10-days.

**In-flight control measures:**
- Personal hygiene for passengers to be enhanced e.g. hand washing.
- Facemasks carried, but not used routinely.

**In the event of a passenger developing symptoms of SARS during flight:**
- He/she
  - must wear face mask
  - must be isolated from other passengers
  - have a dedicated toilet for personal use only.
  - be assigned a dedicated crew member with appropriate PPE e.g. mask, gloves, apron, eye protection.
  - The aircraft captain must inform the destination airport.
  - Contact details for the next 14-days to be obtained from passengers and crew.
  - Well passengers should be allowed to continue with their journey.

**Some passengers were deemed to be at particular risk of acquiring SARS infection during flight and required close surveillance (“zone of risk”):**
- All passengers on the same seat row as the patient.
- All passengers 2 rows in front and 2 rows behind the patient.
No specific disinfectant was identified that could safely kill the SARS virus and be approved for use on aircraft. The WHO issued guidelines that the “zone of risk” should undergo cleaning and disinfection including seats, headrests, tabletops, handsets and any shared facilities, such as toilets.

**Tuberculosis**

The transmission of pulmonary tuberculosis (TB) has been detailed in several reports involving aircraft. The WHO produced guidelines on Tuberculosis and Air Travel based on review of 7 reported incidents. One incident detailed a woman with active open pulmonary TB who made an aircraft journey from Honolulu to Baltimore, via Chicago, and return. Over 900 passengers were identified who were on the 4 different aircraft; only 6 passengers were identified, by TB skin testing and exclusion of other risk factors, as being infected during the journey. None had active disease. All had been seated close to the index case and all had been on the Chicago-Honolulu flight. From this the WHO was able to ascertain that regarding transmission of TB on aircraft:

- There is no evidence that air recirculation facilitates transmission of tuberculosis.
- The risk of TB among cabin crew is similar to that of the general population.
- Risk of TB transmission is by droplet spread and to those in close proximity.
- Risk of TB transmission is higher if flight duration is greater that 8 hours.

**Meningococcal Infection**

There have been no reported cases of a passenger developing meningococcal infection during an aircraft flight. Each year in the USA, approximately 12 individuals with meningococcal infection are identified, who have flown on a passenger aircraft during the previous 7-days. There are no documented cases of secondary infection among aircraft passengers; however, similar to household contacts, passengers seated close to a passenger with meningococcal infection during a long flight (> 8 hours) may be at increased risk.

**Influenza**

Influenza virus has been transmitted to passengers on aircraft. A strain of Influenza virus (A/Texas) was transmitted to 72% of passengers and crew on a small aircraft in Alaska. A passenger with influenza boarded the aircraft in Anchorage, just before the aircraft was delayed on the runway for a 3-hour period, and the air conditioning system was turned off. The high attack rate was due to being enclosed in a confined space with an infectious index case, for a prolonged period. In contrast, a report from Australia detailed a flight lasting 3 hours 20 minutes, on which a passenger with influenza infection was allowed to board. The BAe 146 aircraft was carrying miners to a remote mine in northwestern Australia. A total of 20 miners presented with symptoms of influenza infection over the next week; all had been seated in close proximity to the index case or had been in close contact in another way.
Viral Gastroenteritis

Viral gastroenteritis caused by Norovirus is characterised by severe vomiting and diarrhoea. An outbreak with unusually severe symptoms affected medical personnel at a British Military Hospital in Bagram, Afghanistan, in May 2002. A number of military patients were transported on RAF transport C-130 and C-17 aircraft back to UK without appropriate infection control precautions in place. Members of the aeromedical escort were affected by Norovirus infection during the return flight, resulting in the RAF enhancing Infection Control Guidelines for Aeromedical Evacuation.

Food Poisoning

The production of aircraft meals is a mass catering operation that extends around the globe, and involves the production of millions of in-flight meals. The potential for a breakdown in hygiene standards is possible in such a complex production, although the use of Hazard Analysis Critical Control Points (HACCP) practices should reduce the risk. Since 1947, a total of 41 food poisoning outbreaks involving passenger aircraft, have been reported. Over 9000 passengers have been affected by in-flight food poisoning, and 11 deaths have been attributed to this.

A number of studies have examined the microbiological safety of in-flight meals. One study examined 567 meals produced by 10 flight-catering units at Heathrow airport. E. coli, an organism associated with faecal contamination, was isolated from 21% of in-flight meals. Salmonella was isolated from 0.4% of all meals tested. Microbiological analysis of food samples from a flight kitchen in Greece, detected Salmonella in 1% of hot food items and S. aureus in 24% of cold food items, such as desserts.

The reason so few food poisoning episodes, involving aircraft, have occurred is probably because of gross under-reporting of such incidents. The incubation period of most food poisoning organisms is considerably longer than the duration of most flights. By the time clinical symptoms develop, passengers will have dispersed around the globe, and detecting an outbreak has occurred will be very difficult. Affected passengers commonly believe that their food poisoning is related to the country they have left, and not to the meal consumed on the returning aircraft. The exception to this finding can be with incidents involving enterotoxin-producing S. aureus, which commonly has an incubation period as short as 30 minutes. A Tokyo to Paris flight resulted in 142 passengers being hospitalised, due to nausea, vomiting and severe abdominal pains, shortly after being served S. aureus contaminated ham with breakfast.

Highly Infectious Diseases

A number of viral infections are classified as being highly infectious. These organisms are classically easily transmitted between humans, produce very severe clinical symptoms, and have no available vaccine protection or antimicrobial treatment. Viral Haemorrhagic Fevers, such as Ebola and Lassa fever, or smallpox and monkeypox viruses are included in the highly infectious disease category. Patients with Ebola fever and Lassa fever are known to have travelled on aircraft, while symptomatic, with no reported transmission of
infection to other passengers. However, it is the viral load within the blood and body fluids of such patients that will determine how infectious they are to other passengers on the aircraft. If such a patient were to suffer an episode of vomiting or haemorrhage on the aircraft, a very serious infection control hazard would be presented to the passengers and crew, for the duration of the flight.

The RAF, in conjunction with the UK Dept of Health, staff and maintain a deployable Air Transportable Isolator (ATI) (see photo on page 8). This has deployed to Sierra Leone on 3 separate occasions to repatriate a patient suspected of having Lassa fever, and offers the advantage of supplying a microenvironment for the patient within a negative air pressure, HEPA-filtered plastic tent. A patient with a highly infectious disease can be placed within the ATI, which can then be safely placed on board an aircraft, for aeromedical transport. The patient can be managed by medical and nursing staff, during the flight, using gloved-arm attachments on the side of the ATI. All clinical waste produced remains within the isolator and can be appropriately managed on return to UK.

Summary
There is no evidence that people who fly on aircraft are at any increased risk of infection compared to passengers on any other form of public transport. The use of positive pressure air recirculation does not increase the risk of transmission of infectious disease, particularly if HEPA filters are used in the air conditioning system. Transmission can occur via close contact and droplet-spread, and the associated risk is directly proportional to the proximity of the index case, and the duration of the flight. Food poisoning does occur on aircraft and is probably under-reported by passengers and airlines. For highly infectious diseases, patients can be returned to UK for treatment if required, within the RAF Air Transportable Isolator.

Wing Commander M Artin P. Connor, Consultant in Communicable Disease Control, RAF Centre of Aviation Medicine.

References
6. WHO Travel Update. SARS: 23 March 2003


*Royal Air Force air transportable isolator in Sierra Leone, February 2003.*
THE IMPACT OF THE SARS OUTBREAK IN CANADA

I. A. MACDONALD

Severe Acute Respiratory Syndrome – a very medical term with each word significant. The outbreak of the illness in Canada had a huge local and global impact. To most people living in Britain the outbreak must have seemed far away and of little concern. The rest of the world, and the USA in particular, immediately perceived Canada – in its entirety – 3000 miles across, as the breeding centre in the West for the new superbug – and international visitors stayed away in droves.

The rest of Canada regarded Toronto as the leper colony of mediaeval times – and Canadians stayed away too. Even those 20 miles away, in Brampton, shared this feeling, unless they worked in the big city when the decision was not so simple. Commuters somehow managed to make the trip and survive. The population of the big city, world class as they like to call it, realised that life had to go on and organised themselves – unwillingly at first – but with increasing efficiency. Very few face masks were seen in the streets or on the subway system, but Chinese restaurants were deserted.

The problem hit Canada this year but the disease started in China in Nov. 2002 and who knows when the next similar event may occur, or where. 2003 has been our own Annus Horribilis in Brampton – there was a hospital power failure on 6/28th Feb. with hospital evacuation, just before SARS struck. The great power cut of Eastern North America on 14th August 03, occurred on the same day that the hospital announced the beginning of the end of SARS.

First Contact

An elderly lady stayed at a hotel in Kowloon from 18th to 21st February. She flew back to Canada arriving in Toronto 2 days later. She died 10 days later on 5th March, at home, cared for by family members. There is a fairly large population of Torontonians from China and especially Hong Kong which was formerly the main gateway for emigration. The age range of those affected was from 21 months to 86 yrs. A cluster of 13 cases was identified from the Kowloon hotel. This lady was called the Index Case.

In Toronto the infection spread to her son, then 4 other family members entering 3 different hospitals. The son had passed through a hospital emergency room and infected other patients and staff. One patient was 1.5m away behind a curtain and discharged the same day (9 hours), the second was 5m away (3 beds) then transferred to a hospital bed for 3 days then discharged. The spread to family members and staff was well tracked at a later date, but the damage was done. The index hospital was a 249 bed secondary care community hospital. Initially the staff and paramedics involved were unprotected.

Here was a completely new serious virulent disease – not just flu’, not just pneumonia – perhaps atypical pneumonia as described in the far east, spread by relatively close contact (the word relative is a significant term here in view of the family connections). It was possibly contagious, possibly spread by body fluids, or respiratory droplets and it was resistant to treatment.
The symptoms initially were rather general –

Pyrexia 38°C, respiratory symptoms, cough, gasping, difficult breathing (myalgia), hypoxia, progressing to Radiographic evidence of Pneumonia, or even Respiratory Distress Syndrome, fairly early on. At autopsy there were pulmonary signs but no identifiable cause.

The incubation period was later established at about 5 days (2 - 10).

On 12 March, less than 1 week later the WHO issued a world alert that a severe respiratory syndrome was spreading among health care workers in Hong Kong and Hanoi. The son of the index case died in Toronto next day and the likely link was established. In the Index hospital ICU precautions had already been started for him as suspected TB. Now full hospital-wide precautions were established against contact and droplet infection and later increased, but transmission had already occurred. The ICU and ER were closed on 22 March and the hospital closed for all admissions on 23 Mar. The public health authorities swung in to action in the City of Toronto, Province of Ontario, Federal Health department of Canada and the US Center for Disease Control - Atlanta. The fortress mentality set in. Greater Toronto Area (which includes Brampton) and shortly after that, the whole province (2000 x 1000 miles) restricted hospital access, cancelled routine procedures and clinics, and excluded visitors, medical representatives, suppliers and general wanderers.

We had one entrance for all staff and had to fill in a form daily – the Screening Tool – requesting Travel details, Health Care facility visits, other possible exposure sites listed (eg a funeral home in particular) SARS contacts, SARS symptoms.

Temperature was checked (ear not rectal), any suspicion of a problem and oxygen saturation level was checked. All this before entry to the building. Finally a signature at the bottom of the form each visit. This in addition to quarantine regulations which were voluntary but could be enforced and some times were. This affected thousands of people who had to stay away from work because of possible contact. They led a sequestered life at home together with their families.

At the operating room level where emergency and urgent cases continued – my own area – there were major respiratory precautions for handling patient's airways which hampered routine management considerably. Gown, gloves, N95 mask, goggles. Perhaps the most inconvenient was in the use of adhesive tape which is not mentioned in any anaesthesia textbooks, but is an essential of everyday anaesthetic care. It sticks to rubber better than to human skin. Living in the hospital, ‘on call’, I found the hospital corridors were lonely places at any time of day.

The Organism is thought to have originated in Guangdong province, China. Possibly an animal to human transmutation, with the animal involved being the civet - a cat like creature typically found for sale in markets, there or via pets food excreta, contaminated domestic fowl, or other market foods. There was some argument about the causative organism, but finally a version of the Corona virus later named SARS CoV was identified in Vancouver. This has similarities to the common cold virus. Contact and respiratory droplets are the
probable cause of spread.

Identification of the virus itself – from serum, nasal secretions, stool – by viral isolation, by electron microscopy, by viral culture, by viral RNA test = reverse transcription polymerase chain reaction RT-PCR showing presence of the virus. However the old rules apply – a negative test does not confirm freedom from infection. The big worry was whether asymptomatic patients can transfer the disease.

Treatment

Patients were isolated from other members of humanity, except nursing and medical staff who were all clothed in protective gear, of increasing complexity as time went on. My health centre was created by combination with 2 other hospitals recently and one of our units was set up as one of 4 SARS centres in the Toronto area, to investigate possible cases and treat probable and confirmed cases some cases were transferred from other hospitals or even from the nearby Toronto International airport. Specialised respiratory care and ventilatory care for some critically ill patients was a special hazard to staff. The last patient in our centre died there on August 11.

Drugs included intravenous Ribavirin (possibly not very effective), Levofoxacin, Methylprednisolone and/or Prednisone were used for respiratory distress and haemolytic anaemia possibly secondary to the ribavirin treatment. Another unit treated 14 front line health care workers and support staff and reported on their experiences with the disease – including psychological effects. They were quite a challenging group to manage with their individual anxiety and fears.

After 27 days with no new cases identified in Toronto, contact and droplet precautions were lifted in Non-SARS hospital wards on May 16th. However on May 22nd a second wave of cases, with a less clear origin, was reported which resulted in another 118 cases in the greater Toronto area and the precautions were reintroduced and only relaxed recently.

As of July 10th a total of 438 cases (250 probable and 188 suspect) were reported in Canada, 375 in Ontario. Most of the 44 deaths were over the age of 60 – or had co-morbid conditions.

Fallout

Incredible expense – perhaps $1 billion for Ontario. Surgical waiting lists extended. Many diagnostic examinations delayed. Hospital development will be delayed. Personal medical income was reduced. It appears that the crisis is over - but if you come in to Canada through Toronto Airport you will see an unusual video device scanning everybody at a distance. Your surface temperature has just been checked. Too high and you will be asked to step aside for further testing. Some of the immigration officials wear gloves to check your passport.

Toronto suffered much financially as the rest of the world stayed away. An unlikely source of financial help was the arrival of the Rolling Stones who appeared before a massed crowd of 400,000. They certainly brought fans in to
the city, who seem to have overcome their fears of contagion. However we now talk of the ‘New Normal’. The screening tool has now changed to self-screening, as we all still enter through the hospital through one door. I.D. badges are worn always. Alcohol gel hand rinse is considered a good idea – entering and leaving. More visitors are allowed with the same screening process as staff. No child visitors are allowed. The Sars outbreak is now behind us but its impact will take long to disappear.

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**Ginkgo Biloba**

The ginkgo tree is the oldest living tree species on earth. The oldest tree is in China and about 3,500 years old. In the east it has many symbolic functions. The tree is used for ornamentation and the wood itself can be made into altars or used for brewing sake. Medicinal use of ginkgo is first mentioned in literature in 1505 in its use against diarrhoea. In the 1950s western medicine began to study its medicinal value.

Ginkgo biloba has three important effects on the body. It improves blood flow to most tissues and organs (including microcirculation to small capillaries), and significantly, to the brain. It is an antioxidant protecting against oxidative cell damage from free radicals and inhibits the platelet aggregating factor and also protects sodium, potassium ATPase activity.

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*Working to rule can do even more harm in medicine that it does in industry.*

The practice of medicine requires a fresh judgment for every patient.

*Theodore Fox.*
INTRODUCTION

As people take more adventurous holidays, especially activity holidays, there is a greater likelihood of contact with ticks. Indeed, even with camping and caravan holidays, there has been an increasing number of individuals complaining of tick bites. In recent years, this might be largely due to warmer winters and the survival of large numbers of ticks over winter. Previously, the tick population was dramatically reduced by very low winter temperatures. This can be bad news for the traveller. Ticks probably carry a greater range of diseases than any other invertebrate pest. In the United States of America (USA), mainland Europe and Britain (for the purposes of this article Britain will be considered separate from mainland Europe), Lyme disease is being increasingly recognised. Therefore, because of its frequency and importance, this article will focus on Lyme disease.

TICK LIFECYCLE

The egg of a tick hatches into a larva which is smaller than a pinhead and has just six legs. After a blood meal usually from small mammals such as mice, the larva falls off the animal and shelters in the forest floor, moults and turns into a nymph. The nymph is the size of a pinhead, has eight legs and after a blood meal (usually from larger mammal hosts, such as deer or sheep), falls off onto the forest floor and moults into adult males and females. The unfed female is about twice the size of an adult unfed male, usually about 3-4 mm in diameter. After full feeding the adult female is 10 mm in diameter and in the shape of a flattened raisin. Ticks, especially sheep ticks, are slow feeders and take several days to complete a meal. It is in the final day of feeding that large quantities of blood are taken up (this is called “the big sip”). At this stage, the adult female can expand to great size. If they are not interrupted, the larval and nymph stages feed for 3-6 days. Daily inspection of body can therefore identify ticks and prevent them starting their feeding.

LYME DISEASE

Points – This condition was first recognised in 1975 in the town of Lyme, Connecticut, USA. An outbreak of juvenile arthritis was regarded as suspicious and warranted an investigation to find an infectious source. Since then, the causative organism has been identified as a spirochete, Borrelia burgdorferi sensu lato. Three pathogenic strains of B. burgdorferi sensu lato complex (B. burgdorferi sensu stricto, B. garinii and B. afzelii) are recognised in Europe and Britain. In contrast, only one strain of B. burgdorferi sensu lato complex (B. burgdorferi sensu stricto) is found in the USA. The characteristic clinical presentation of early Lyme disease is erythema migrans. This skin condition starts as a flat circular erythema around the tick bite and expands in all directions with central clearing of the rash to form a target lesion. The finding of this clinical sign is diagnostic.
Presentation – Non-specific symptoms such as:

- myalgia
- arthralgia
- low grade fever
- neck pain
- flu-like illness,

may be the initial presentation of the disease.\(^3\) Patients may also be asymptomatic and progress to late disease. More important neurological presentations are meningitis, cranial nerve palsy and radiculo neuritis; central nervous system presentations appear more common in Europe and the USA compared to Britain.\(^2\) Cardiac disease, usually a conduction system defect, is generally self-limiting.\(^3\)

Late Lyme disease may have diverse presentations. One study in USA suggested that 25% of patients develop arthritis, usually large joints.\(^6\) However, joint disease appears much less common in Europe and Britain. In contrast, various dermatological syndrome are less seen in USA, compared to Europe and Britain. In all countries, neurological complications appear with increasing frequency. Peripheral neuropathy, encephalopathy and ocular disease may occur months or years after the initial infection. Most importantly, a Post Lyme disease Syndrome similar to Chronic Fatigue Syndrome or myalgic encephalomyelitis has been described.\(^7\)

Precautions

Human beings get tick bites when they invade the tick habitat.\(^1\) It is therefore important that individuals recognise this and take appropriate precautions. If one sticks to the middle of paths and wears sensible clothing with a minimum of exposed bare flesh, the chances of a tick attachment is small. After an outing, the body should be inspected for ticks. If ticks are removed within 24 hours infection is unlikely. Forested areas are more likely to have ticks rather than exposed tops of mountains. Ticks need a protected microenvironment so that they can survive frost, sunshine and strong winds. Dependent on the area, the amount of ticks infected with Lyme disease will vary but probably less than 25% of all ticks are infectious. In Britain, tick bites principally occurred between April and October. However, in recent years the warmer climate has meant that tick bites can be obtained at any time of the year. Humans visiting a tick habitat will not necessary become infected. A tick bite is necessary before there is any chance of infection, and many tick bites do not result in infection as not all ticks are infected.

Diagnosis

As the causative organism of Lyme disease is a spirochete, diagnosis has a number of problem areas.\(^2\) It is not easy to grow the organism and especially in Britain. Our laboratory is the only one that has managed to grow local strains and keep them in culture.\(^2\) Serological assay is the mainstay of diagnosis. Unfortunately, the enzyme-linked immunoassays (ELISA) have poor specificity. It is therefore necessary to confirm all ELISA tests by Western blotting. Indeed, only 30-35% of ELISA positive results can be confirmed by Western
blotting. At the moment, in Britain, most laboratories use assays based on European or American antigens. We believe that the diagnosis would be tremendously improved in Scotland if we were able to use local isolates as a source of antigens. It is also important to remember the limitations of testing. In early disease, the antibody response can be slow and may be stopped by prompt antibiotic treatment. The laboratory may also be of limited help in patients with late disease; it is difficult to differentiate between active and past infection. In many cases, the laboratory tests support a diagnosis rather than being diagnostic. Increasingly, the use of the polymerase chain reaction (PCR) is being used to identify current infection, and this expensive test is likely to be required more in the future.

Management
Ideally, individuals should only be investigated when they are symptomatic; and if laboratory tests are positive, they should be treated. For early Lyme disease treatment is with ampicillin or doxycycline. In late Lyme disease parenteral treatment with ceftriaxone and cefotaxime is required. Unfortunately, in many areas where there is high tick infestation, there is a tendency in Europe and in the United States to treat all tick bites with prophylactic antibiotics. In addition, in some areas of the USA, there are entire clinics devoted to the treatment of only Lyme disease. Many of the Internet sites dealing with Lyme disease advise prolonged antibiotic treatment, sometimes over several years. There is no evidence that these prolonged antibiotic regimes are of benefit, although there are many anecdotal, case histories of the value of such treatment.

The Future
If present trends continue, more and more travellers will be invading the natural tick habitat. To prevent large increases in Lyme disease, a two pronged approach is required. Firstly, like in the USA and some parts of Europe, those providing holiday facilities in tick infested areas will need to ensure that a tick population becomes controlled. This can be done by pesticides, habitat modification and host eradication. Of these, habitat modification has been the most successful, especially in the USA. Thus, encroaching woodland can be cut back near the edges of campsites and footpaths made wider. Control of vegetation will control not only the tick population but also small animals. Pest eradication has been again used in the United States: the reduction of large deer herds has resulted in reduction in the incidence of Lyme disease. However, this can have the opposite effect and if hosts are reduced too quickly, ticks may venture into areas where humans live with a resulting increase in infection.

Secondly, it is also important that the traveller entering the tick habitat be aware of the risks. This health education is critical. Individuals then may be able to take appropriate precautions, and this will result in fewer tick bites. Effective removal of ticks will also further reduce infection risks. In life, we are mostly able to choose our travelling companions. If we cannot, then the more we know about our companions, the easier is the journey. This particularly applies to ticks.
References

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We must prevent what we can prevent, terminate what we can terminate, investigate what we can’t prevent or terminate. – Greenberg, 1980.
DIVING can be of two types. In snorkel or skin diving, depth and duration of the dive are dictated by lung capacity. The diver takes a deep breath then returns to the surface, less than a minute later with lungs bursting. Aqua lung or scuba (self-contained underwater breathing apparatus) diving is quite different. Special equipment enables the diver to enter safely, a wonderful new world for as long as compressed air cylinders allow. Below the waves there is an exciting world to discover. Life on this planet began there in its most primitive forms with seaweed and shellfish, almost unchanged after four and a half billion years.

A wondrous world

There is a strange beauty under water and a swim along the sea bed will take the diver through varied and striking terrain with gardens of sea anemones, or patches of white sand, high forests of still seaweed, perhaps against a backdrop of high cliffs or beneath giant rocky cathedral-like arches.

At night, with no need to seek shelter, sea creatures are present in an abundance and the plant and fish flourescence shiver like the Northern lights. One constantly marvels at the wonders of the deep – to see a long line of scallops propelling themselves along one behind the other as if linked by some form of communication; salmon gliding nobly along on a fixed bearing which continues exactly, after rounding a rocky obstacle, birds swimming with beating wings far below the surface looking like some strange new sea creatures.

Below water, largely unexplored, lie links with the past. An aura of haunting sadness surrounds old wrecks which are always fascinating to visit. In the Scilly Isles, wrecks from the last 500 years can easily be reached. The marine life both vegetable and animal abounding within the wrecks make them look like giant aquaria. There is also good hunting for lobster, edible crab and scallops and the odd fish which can be caught manually from behind.

Diving is the meeting point of marine biology, physiology, physics, medicine, boat handling, navigation and meteorology and diving requires a working knowledge of each discipline. Below water there is a calmness, tranquility and utter silence. To move freely in a weightless environment, as in space, is totally relaxing. To enter and enjoy a potentially hostile environment is a thrill and every dive an adventure.

History of diving

Because of the hostility of the environment, early diving must have been restricted to techniques used by native pearl and sponge divers. The dives would be breath holding in type. Stone weights used for rapid descent, though dives deeper than 30 metres or exceeding 2 minutes would be highly unlikely. Divers took part in great naval battles as early as 400 BC where they were used to cut ships anchoring cables and destroy the defences. Pliny in AD 77 recorded the use of breathing tubes from surface to diver, representing the first
snorkel. However man lacks sufficient respiratory effort to counteract the pressure at anything more than 2 metres depth. There was the added problem of excessive dead space of the breathing tube. Leonardo Da Vinci sketched designs for diving equipment and submarines, but it was not until the 1800s with the development of efficient air pumps that diving with a helmet became the accepted method. Bellows were used to supply compressed air and tubes linked the diver with the surface.

By the late 1800s depths in excess of 15 metres were reached. There was accompanying mortality and morbidity mainly from the effects of decompression sickness or the bends. Haldane recognised the problem and introduced decompression tables which greatly improved matters.

Modern sports-diving dates from 1943 when Cousteau designed a safe demand regulated air supply from compressed air cylinders worn on the back. This design has required little improvement since. The diver had been separated from surface connections and could swim freely around at depth for as long as the air supply lasted. Sports divers use only compressed air.

**THE PROBLEMS OF DIVING**

The sub-aqua environment is truly hostile to man. Apart from the obvious lack of air there are the other problems of changing pressures with depths, cold, and poor visibility.

**The pressure effects on tissues**

The weight of water in a bucket amply confirms that water is heavier than air. On the surface, atmospheric pressure is 1 bar. At 10 metres below the surface the pressure has doubled to 2 bars and there is a 1 bar increase in pressure for every further 10 metres descended, so that at 50 metres, the pressure will become 4 bar. Descent therefore is accompanied by a considerable increase in pressure and conversely ascent by reducing pressure. Water which is uncompressible constitutes at least 70% of the body tissue, pressure transmission causes no tissue distortion, unlike the effects of pressure on the air containing cavities of the body. This difference can be easily demonstrated by comparing the effects of a 50 metre dive on a grape and a sealed air-containing tobacco tin. On returning to the surface, the grape will be found unchanged while the tin will be flattened. The air filled cavities of the body can be likened to the tobacco tin and Boyle's Law applies. This states that as the pressure increases the volume of a gas will decrease proportionally and vice versa. The lungs and the other air filled cavities of the body – the middle ear and sinuses, are therefore affected by these pressure changes.

**The lungs**

To properly fill the lungs at 10 metres depth (2 bar pressure) air must be delivered at this same pressure. Otherwise the lungs couldn't inflate or alternatively they could burst. Similarly air breathed at 30 metres to fill the lungs at 4 bar pressure will expand to occupy four times the lung volume at the surface. Thus on a quick ascent, unless the air is expelled, the lung will burst. Trauma from pressure effects is known as barotrauma, pulmonary barotrauma or burst lung.
Expanding air inside the lungs may rupture the alveoli with tracking of air into the pulmonary venous system and interstitial tissues. Massive rupture of the lung with widespread tearing and bleeding can result or there may be air embolism, pneumothorax or surgical emphysema. If an aqua lung diver holds breath therefore during the rapid ascent from depth, and this can occur even in a swimming pool, air embolism, pneumomorax and mediastinal emphysema can result. The symptoms are immediate as soon as the diver surfaces and these most commonly will be:

- chest pain
- collapse with or without convulsions
- stupor.

The first important rule in aqua lung diving therefore is to breathe normally at all times and never to breath hold. Should the ascent rate from depth exceed the recommended maximum 15 metres per minute the diver must actively exhale.

**The ears and sinuses**

The ears are very sensitive to changes in pressure and will be affected within 2 metres of leaving the surface. The middle ear is bounded by the tympanic membrane. Laterally and medially it is linked by the narrow Eustachian tube to the pharynx. The increase pressure of water in descent will push the tympanic membrane inwards and will cause increasing pain with further descent. The ear drum will rupture unless this increased pressure is countered by an equalising pressure of air up the Eustachian tube from the throat. The air breathed in from the diver's compressed air system being at the same pressure as that of the surrounding water. If rupture does occur, cold water will enter the middle ear cavity where it will upset the semi circular canals causing vertigo. Otitis media and defective hearing are later risks.

Eustachian tubes are normally closed but for the most people, simple swallowing will open them to equalise the pressure on either side of the ear drum and clear the ears. For others it will require more practice and may require a combination of the valsalva manoeuvre where the diver breathes against the held nose and at the same time swallows.

If the ears cannot be cleared, then the diver must ascend to a level where the discomfort ceases. Eventually after four or five minutes, the pressures will usually equalise through tissue transmission. For this reason the wearing of ear plugs is forbidden as, because of the increased pressure in the middle ear, the ear drums might come to rupture out the way.

**The frontal, axillary ethmoid and sphenoid sinuses**

Like the middle ear cavity, the sinuses are connected to the respiratory airway by fine passages. If these do not balance automatically, unless blocked, they will do so as a result of ear clearing efforts. If the connecting passages are blocked then an imbalance of pressure will cause acute pain. If the pressure is not relieved either by equalising or by ascending and reducing the ambient water pressure, the sinus cavity linings will bleed, flooding the cavity. This will balance the pressure and relieve pain. However, on surfacing a nose bleed will confirm that there has been a sinus blockage. It is important therefore that if
there is severe nasal congestion or infection as in a head cold, heavy catarrh or hay fever which causes inflammation and swellings of the nasal tract tissues, the Eustachian tubes, sinus cavities and airways, diving should not take place.

**Mask squeeze**
The diver’s mask represents an extension of the nasal airways and the air space within it will be compressed on descent. This compression can lead to the painful condition or mask squeeze which produces a popeye effect and could be potentially damaging. Exhaling a small amount of air through the nose into the mask during descent will easily prevent this problem.

**Dental trauma**
Occasionally if there are minute cavities within dental fillings, these may fill with air under pressure. In the event of this air being trapped and expanding during ascent, considerable tooth ache and even disruption of the tooth could result. Dental treatment will prevent such a problem.

**SPORTS DIVING**
There are 50,000 individuals in the U.K. who participate in sport diving. Sports divers and many novices follow their sport in the waters of the Red Sea, the Caribbean and the Indian Ocean. Travel health professionals may be asked to perform a medical examination before their departure, or may be asked to see a diver with vague symptoms after return from a diving holiday. It is important to know the symptoms and signs of neurological decompression sickness as this is a treatable cause of spinal damage which will cause permanent spinal paralysis if not promptly and adequately treated. With the increasing trend towards medical litigation, it would be a medico-legal disaster to miss such a diagnosis. This problem affects shallow water air sports divers who dive using air to a maximum depth of 50 metres. Think of a hypothetical diver and the effects on the body during a dive as he/she immerses in the water, descends to depth, tries to perform some tasks at depth and then returns to the surface again.

**Immersion Phase of Dive**
Immersion in sea water rapidly conducts heat away from the body as water conducts heat seven times more quickly than air. The diver is therefore always in negative thermal balance despite wearing a wet suit or dry suit for thermal protection. At an average sea temperature of 11°C, one can expect shivering with the cold, despite wearing a wet suit. The heat loss can be accelerated on the surface by wind chill while riding around in fast inflatable boats. Propeller injuries are surprisingly uncommon although a diver can be difficult to spot in a heavy sea swell. One of the most common hazards in sport diving is to be swept away from the boat in deteriorating weather conditions. The diver will be supported by the life jacket and be partially insulated against the cold by a wet suit, but by the time of recovery will almost inevitably be hypothermic.

**Treatment**
On recovery, insulation of the head and neck is particularly important as this
is the area of the greatest heat loss. The victim should be rewarmed in a warm bath. During the rewuarming the core temperature may initially keep dropping and when the rectal temperature reaches 32°C there is a significant danger of ventricular fibrillation and cardiac arrest.

**Descent Phase of Dive**

With practice it is possible to breath-hold dive using a snorkel to ten metres. However, self-contained underwater breathing apparatus (SCUBA) has made diving a very popular sport. A compressed air cylinder is carried on the back and the pressure of the air breathed by the diver is reduced by means of a demand valve so the water pressure increases by one atmosphere absolute every ten metres and therefore the pressure of air breathed by the diver is increased by one atmosphere for every ten metres that he descends. Therefore, at a depth of 30 metres, the diver has to breathe air at a pressure of 4 atmospheres absolute (3 x 10m + surface atmosphere = 4 atmospheres absolute).

The physical gas laws predict changes in volume, temperature, density and partial pressure of gases with changing pressure. The most obvious effect of increasing the air pressure breathed during the descent is that the pressure equalisation has to work in the middle ear spaces, sinuses and lungs. Poor eustachian function will cause aural barotrauma which results in a bruised appearance or rupture of the tympanic membrane. Spontaneous resolution usually occurs within two weeks and the diver should be advised not to dive until the tympanic membrane returns to normal and eustachian function has returned.

**Functioning at Depth**

As the total pressure of the air breathed is increased at depth, by Dalton’s Law of partial pressure, the pressures of each constituent gas within air is increased. Air consists of 21% Oxygen, 76% Nitrogen, 3% CO₂ and inert gases. The partial pressure of nitrogen therefore increases with depth and begins to exert a narcotic effect on the body at depths below 30 metres. Although nitrogen is a chemically inert gas, it is thought to act in a similar manner to anaesthetic gases, and slow down neural transmission. Nitrogen is very fat soluble and it is postulated that it dissolves into the lipid component of nerve cell membranes. The resulting effect is very similar to alcohol intoxication and a serious hazard to personal safety. Nitrogen narcosis manifests itself with euphoria, over-confidence, poor mental judgement and aggravation of panic. The effect increases with depth such that air diving becomes unsafe below 50 metres.

The air breathed at depth has a higher density as its pressure has been increased. The thicker gas therefore increases the physical work of breathing and tends to cause retention of CO₂, which has its own narcotic effects. The red component of the light spectrum becomes absorbed with depth and there is a magnifying effect on the visual acuity.

**Ascent Phase Dive**

Boyles’ Law states that the pressure of gas is inversely proportional to its volume. This means that when a diver who is sitting at a depth of 30 metres
breathing air at 4 atmospheres absolute ascends, he/she will have to expire four
times his lung volume by the time he/she reaches the surface and the environ-
ment pressure has decreased to one atmosphere absolute.

If the diver holds breath during the ascent, the expanding air will cause lungs
to rupture like a balloon. Pathological consequences of such pulmonary baro-
traumas are cerebral air embolism, pneumothorax or surgical emphysema of
the neck.

*Pulmonary barotrauma* is obviously a life threatening illness and often fatal. There is usually a history of a rapid and uncontrolled ascent or it may be
associated with the rescue of an unconscious diver from depth whose airway
is not protected during the rescue. Air trapping diseases such as asthma and
bronchitis or a lung tissue weakness from congenital bullae, predispose
individuals to pulmonary barotrauma. Medical screening to exclude such
illnesses is therefore vital.

*Cerebral air embolism* presents immediately on surfacing with chest pain,
collapse and hemiplegia. The only effective treatment is recompression in a
recompression chamber. The victim should be transported to the recompression
chamber in a head down position on his left side. Oxygen and intravenous
steroids should be given immediately if available.

*Pneumothorax* presents with the classical symptoms and signs following a
dive and requires a normal intercostals drain. Surgical emphysema will cause
syncope, but will resolve spontaneously provided there is no associated air
embolism or pneumothorax. Pulmonary barotrauma can occur while using an
aqua lung if the person holds breath during the ascent from the bottom of the
pool.

**Decompression sickness**

During the dive nitrogen at an increased partial pressure dissolves in the
body’s tissues. On returning to the surface, this extra nitrogen load must be
expelled from the body in a controlled manner or decompression sickness will
result. Bubbles of nitrogen form in the blood and cause the multisystem disease
of decompression sickness.

Clinically the manifestations are divided into minor and serious decompres-
sion sickness. The olloquial name “bends” refers to acute joint pain following
a dive. Serious decompression sickness occurs when the CNS is affected.
Spinal decompression sickness produces initially trivial symptoms during the
hour following the dive.

Back ache, paraesthesia in the feet, shooting pains down an arm, unsteadis-
ness on the feet, loss of motor power and urinary retention, all signify an
impending disaster.

Unless treated with prompt and adequate recompression in a recompression
chamber, permanent spinal paralysis will occur. Complete resolution of
symptoms and signs occur with correct treatment.

**Medical Examination for Diving**

The examination for sports driving is mandatory on joining a sub-aqua club
but beginners using facilities abroad may not be exposed to the same medical
checkups. GPs perform the examination to exclude any serious illnesses and in particular epilepsy, asthma, diabetes, heart disease and psychiatric disease.

With acknowledgement to Scottish Medicine for edited version of first publication.

Ken Stewart,
Retired consultant and active sub-aqua enthusiast.

The Arctic is an expanse of ocean almost completely surrounded by land, whereas Antarctica is a continent surrounded by water. There is no land at all between latitudes 56 and 62 degrees south.
TRAVEL HEALTH INSURANCE – FACT OR FICTION

A. MELROSE

Morbidity that leads to hospital treatment and fatality while the person is overseas is more often linked to pre-existing illness than infectious disease. Cardiovascular events such as MI, and complications of diabetes and COPD are the most common causes of death. These are particularly important in older travellers with pre-existing conditions, and should be identified from the history at the pre-travel consultation.

People receiving medical treatment should have adequate medical insurance with a minimum cover of £2 million. Some policies for health cover outside the EU only cover emergency treatment, and any other service will need alternative funding. The EU form E111 should be completed at a post office before travel. This provides free or reduced-cost emergency treatment on the same terms as nationals in the countries visited. It does not cover emergency repatriation.

Almost four out of 10 British holidaymakers take the risk of going abroad without travel insurance, a study revealed. A survey by NatWest Insurance services found men are the worst offenders, with 45 per cent setting off without cover. Only a minority of those who do pay for travel insurance bother to read the fine print. Three-quarters admitted they had no idea whether they even had enough cover for the contents of their cases.

Travellers should be encouraged to declare pre-existing medical conditions. A policy may be declared void if, for example a traveller has suffered an MI and is taking anti-hypertensives, or statins but has not declared this.

High-risk sports such as white-water rafting, skiing and scuba diving are not usually covered under standard policies, and travelling against medical advice or with a terminal prognosis are situations also not covered.

Travellers who booked holidays to countries affected by the SARS virus found the insurance industry less than helpful. If they cancelled their holiday, there was no compensation and if they went to a country to which travel had been advised against by WHO, their insurance became invalid!

It is against the law for an insurance company to load premiums for a disabled person without statistical evidence to show that the disabled person is a greater risk than someone who is not disabled. None the less, travellers still need to disclose an existing condition or they risk invalidating any claim. Tripscope can provide details of sympathetic insurers.

A Price to pay for adequate travel health insurance cover

An increasing number of travel insurers will not quote at all if someone has a serious health problem or has been in hospital during the past year. If they do, many insist on excluding claims arising from the condition in question. Quotes reveal a big disparity between insurers. Medicover (0870 735 3600), specializes in travel insurance for customers with serious health problems. Premiums may be hefty. One can use Medicover’s computer screening service to assess risk.

Free spirit insurance (0845 230 5000) has been developed to help people
with health problems. It has devised its own screening service to assess risk. Preferential (01702 423393), has a good reputation for covering customers with pre-existing medical conditions, as well as those going on long-stay holidays.

Travel insurance premiums are set to rise by as much as seven per cent next year, partly due to a growing number of fraudulent and inflated claims by doctors in Mediterranean countries. Holidaymakers were being tricked by doctors in Greece into paying for medication they did not need. Fraud has also occurred in Ibiza and Malta.

Removal of Indemnity Cover for Doctors working on Cruise Liners

The Board of Directors of at least one of the Medical Insurance Protection Societies recently decided, after a review of indemnity provisions, to withdraw indemnity cover for members working as ships’ doctors on cruise liners. This has immediate effect and applies to all cruise liners regardless of their geographic locations.

Mid-air insurance deals on the way

Airlines passengers who forget to buy travel insurance before they take off will soon be able to buy it in-flight. Insurer Primary 1 has teamed up with low-cost airline Ryanair to sell policies to passengers during their journey. Those using any of Ryanair routes will be able to buy a policy from members of the cabin crew. They will then activate the cover when they reach their destination by calling a 24-hour UK phone number. The insurance company said it decided on the move after research showed 14pc of passengers going abroad did not have travel insurance. The policy will cost £15 per person and offers up to 31 days comprehensive cover in Europe.

In 1995, there were 2.8 million trips abroad by Britons aged over 65; 200,00 to USA; 300,000 to countries outside of Europe.

The average age of a SAGA (company specialising in vacations for older people) traveller is now 66 and increasing each year. In 1990 their bookings to long haul exotic places was negligible but it now accounts for 20% of all their holidays. Destinations are Thailand, Borneo, China and Australia. British Airways holidays also report increasing number of over 60s travelling with increase in travel to Nepal, Ecuador, Botswana and India.

Increasing number of insurance notifications for both illness and accident with increasing age. Cardio vascular illness and accidents to lower limbs more frequent in over 60 travellers, Health insurance. JTM 2003 10.185-188.
TRAVEL HEALTH PROVISION AND THE NEW GP CONTRACT

S. F. RILEY

Anyone having any association with General Practice will know that a new contract for GP’s will come into effect in April 2004. This contract has been accepted by the profession in spite of the fact that there are many areas of it that still need clarification and the exact financing of it is still unclear. Some monies that should have been paid in October still have not materialized as at the beginning of November. Let us hope this is not a portent of things to come! However, this is not a political article but one that will examine what will happen to travel health provision under the new contract - though at the outset it is important to say that, even at this stage, there are aspects of this that are by no means clear.

The fact that I am writing this and you are reading it, indicates that we both have an interest in Travel Medicine and feel that it is important in protecting the health of travellers. Until recently it appeared that various governments have not attached a similar importance to the subject but the publication of Getting Ahead of The Curve from the Chief Medical officer and the formation of NaTHNaC (National Travel Health Network and Centre), which is funded by the DoH and which aims to co-ordinate the provision of standardized, evidence based travel health advice, are hopeful signs that this may be changing.

Currently, travel health advice in general practice is usually provided by the practice nurse, almost by default, as most GP’s do not have a particular interest in it. However, there is an income to be made by providing the service as travel vaccines either attract an item of service payment or have to be paid for by the traveller. From April 2004 item of service payments will cease and will be incorporated into the 'global sum'. This may mean that some practices will stop providing travel vaccines as there will no longer be a financial incentive to do so. On a positive note it will also have the effect of removing ‘postcode payments’ whereby some health authorities will pay two item of service payments for combined vaccines such as hepatitis A + typhoid whereas others will only pay only one. Most practices in England and Wales carrying out travel immunizations will purchase the vaccines from the drug company and, if appropriate, claim the cost back plus VAT, an on-cost and container allowance back from the Prescription Pricing Authority. This provides a degree of profit particularly if a good discount has been obtained from the drug companies. For the time being this arrangement will continue, though the plan is for it to be put under review by an ‘expert group’.

Vaccination for free or at a price

One of the commonest queries raised by those in general practice who administer travel vaccines relates to, which vaccines are free to patients of the practice and which should be charged for. Some are clear cut such as Yellow Fever (which should be charged for) and Hepatitis A (which should not). The ‘grey’ areas tend to relate to the provision to travellers of hepatitis B, meningi-
tis, and to an extent, rabies. These should be charged for (except, in the case of rabies, in very specific circumstances) but, it is not uncommon for these to be provided free of charge to the patient but, at a cost to the NHS. Conversely some practices will charge for hepatitis A and typhoid which should be provided free of charge. One of the contract negotiators stated to GP magazine recently (GP, September 1) that he expected all travel vaccinations to be private. What can and cannot be charged for will, hopefully be clarified before next April when a statutory act is laid before parliament clarifying paragraph 38 of the terms of service which determines what GP’s can charge for. We await parliament’s decision but expect it to remove many of the uncertain areas.

Effects of new contract

Under the new contract vaccination and immunization is an ‘additional service’. This means that although practices will normally be expected to provide the service they may opt out under certain circumstances. In 2004/05 this would be at a cost of £2220 per GP. It is not entirely clear whether this refers to childhood immunizations or all immunizations. Personal experience suggests that many practices have already stopped providing travel immunizations. We are seeing many patients who have been told by their own practices that they will not do their travel immunizations. Not having previously provided a service is one reason a practice may be allowed to opt out of providing the service, as is not having the appropriate expertise within the practice. Does that mean that those practices that do provide a travel health service will have to have had some kind of appropriate training? If so it can only serve to improve the standard of service provided.

If a practice does opt out of providing travel vaccines their travellers will have to access their vaccines elsewhere either at a private travel clinic, which will often charge an additional ‘consultation fee’ or at another facility possibly provided by the PCT (Primary Care Trust), or perhaps, most worryingly, forego them altogether. This may give the opportunity for practices who have sufficient interest and expertise to apply to be a provider of ‘enhanced services’ in travel health, providing the service for the patients of those practices that have opted out. These providers will be expected to deliver services to a higher standard than would be expected under ‘essential or ‘additional’ services. While this would be a useful source of income it should be made clear that practices will not be given any preferential treatment if applying to provide these enhanced services ie they will have to compete with other potential providers including private travel clinics. In addition it is becoming increasingly clear that most PCT’s will have no money available to pay for these services at least for the first year. Finally it should be said that, travel health has not specifically been identified as an ‘enhanced service’ though, in theory, there is no reason it shouldn’t be.

There is one thing that the new contract does make clear and that is that a practice may accept fees from its own patients ‘for providing drugs and/or medical supplies which a patient requires while he or she is abroad’. The length of stay appears not to be relevant. It is also made clear that a practice may accept a fee for examining a patient to determine whether they are fit to fly.
Two final thoughts – firstly a significant minority of practices now work under PMS (Personal Medical Services) contracts rather than the GMS (General Medical Services) contract to which this article refers, and there are parts of the above that may not apply to them depending on the terms of their contract. Secondly if practices modify the way they deliver travel health care or even stop it altogether, they will need to bear in mind when making their decisions that it will impact on other members of the practice particularly our nursing colleagues.

Dr Steve F. Riley is a gp in Manchester.

Only the mediocre man is always at his best.
W. Somerset Maugham.
BEGINNERS’ SECTION

THE TRAVEL HEALTH CONSULTATION

C. DRIVER

The Practice nurse role has expanded to such a degree that nurses now have greatly increased demands on their time and the complexity of a travel consultation could be overlooked. Such a consultation should not be viewed as simply a matter of “giving a few Jabs”. Studies have shown that vaccination can prevent only 5% of travel related ill health and that it is the lifestyle choices of the individual rather than the destination that will be the biggest risk to the traveller’s health. (Cossar et al 1990)

The Travel Health Consultation

Good travel advice, appropriate vaccinations (following ‘informed’ consent) and malaria prevention advice cannot be given in a routine short appointment. An initial appointment should be a minimum of 20 minutes (preferably half an hour) in order for a proper risk assessment to be performed and followed up with the necessary vaccinations and advice. There is a strong case for travel advice to be organised into specific clinics just as Diabetes, Asthma, Cervical Cytology and many other clinical specialties are. This would allow for adequate allocation of appointment time and most efficient use of resources. If this is not possible then the Nurse needs to discuss with reception staff the allocation of a suitable length of appointment for any requests for “travel vaccinations”.

The Risk Assessment

In order to give comprehensive and accurate advice the Nurse needs to ascertain the following:

- Date and duration of Travel
- Purpose of visit (including all activities planned)
- Destination/s (exact location – not just the country) include stopovers
- Type of Accommodation
- Patient’s age
- Mode of Transport
- Current state of health
- Current Medications
- Medical History
- Allergies
- Vaccination History
- Pregnancy
- Travel Insurance
- Malaria chemoprophylaxis recommended.

A patient history sheet/questionnaire, which can be designed to suit the individual surgery’s record system can be used to facilitate this process. It may be partly filled in by the patient in the waiting room but should always be carefully gone through during the consultation to ensure that all questions were properly understood. Ideally this sheet will also have space available on which to record the advice given, vaccinations administered and where appropriate Malaria chemoprophylaxis recommended.

A good atlas is essential so that the exact destination/s can be established. Those nurses who have a PC in their treatment rooms will find a CD Rom based
atlas very useful for finding the less familiar destinations.

Once all this information has been obtained there are various tools that can and should be used to ensure that advice specific to the individual’s travel is given.

Whilst charts such as “Travax” or the insert in “Pulse” are a useful starting point (provided they are replaced with each new version) they can only give broad recommendations. Nurses using these charts should read them thoroughly including all the explanatory notes and “Keys”.

More in depth information can be obtained from books such as the Department of Health’s “Yellow Book” – Health Information for Overseas Travel (2001) or the World Health Organisation’s International Travel and Health (2003). They both contain information on malaria prevention and the various regimes for chemoprophylaxis. The WHO book is published annually so provided the most recent copy is used the information will be reasonably up to date. The “Yellow Book” is not published as frequently and the nurse must realise that some of its information may become less valid as time goes by. The content of both books can be viewed on their respective web-sites. (See Resources.)

The Guidelines on Malaria Prevention in travellers from the UK should be treated as the Standard when advising on this issue. The Guidelines are no longer distributed in hard copy to General Practices but can be accessed on either the Health Protection Agency or the Malaria Reference Laboratory’s web-sites. (See Resources.) Any Nurse who advises Travellers about Malaria should have read the most recent version and should ensure that they keep up to date on the subject.

An Online database such as TRAVAX (see Box 1) which is updated daily is the ideal tool for the Nurse giving travel advice. There is a vast amount of information on the database including country specific recommendations covering not just the vaccine preventable diseases and malaria chemoprophylaxis but non vaccine preventable diseases, recent disease outbreaks, notes on special requirements such as visas and whether there are any reciprocal healthcare arrangements. Background information can be found on many of the travel associated diseases as well as information about specific types of traveller. Malaria advice is very comprehensive and there are links to maps which show the areas of an individual country where malaria transmission occurs. This is invaluable when assessing the specific risk of a traveller. The information can be printed off and given to the patient or they can be referred to the public access site called ‘Fit for Travel’ which has similar information but is aimed at the traveller rather than Healthcare Professional. There are many other websites which the Nurse can use to gain information although the others are not as easy to use during a consultation – see further resources.

Box 1 – TRAVAX
Web-site can be found at www.travax.nhs.uk
Subscriptions for General Practices outside Scotland are £50 per year, however PCTs can subscribe for the whole trust for just £250 per year.
The public access site can be found at www.fitfortravel.scot.nhs.uk
Advising the Traveller

Once all the information has been gathered and information sources checked then lifestyle advice can be given and vaccination plus malaria prevention recommendations made.

When recommending vaccinations consider how the infection is spread?

• Is it person to person – diseases of close association such as TB, Diphtheria, Meningitis are more of a risk for those going to work abroad or who will be staying in low Budget accommodation where they will be mixing closely with the local population. They are less of a concern for the “package” or short term tourist.

• Is it insect borne – most mosquito borne infection is more prevalent in rural situations especially in the rainy season. Generally there is no transmission of malaria above 2000m so those going on high altitude treks such as the Andes or Himalayas may not need chemoprophylaxis.

• Is it spread by contaminated water or food – those staying in low budget accommodation or in remote areas where sanitation is poor will be at greater risk than those in the “luxury” hotels (although even the luxury hotel is only as safe as its kitchen porters standard of hygiene!).

Some of the points to consider when advising about malaria prevention are:

• Is there transmission in the area being visited?
• Is there any drug resistance in the area being visited?
• Are there any contraindications to the recommended drugs?
• Involve the traveller in the decision – discuss the options available and help them to choose the best one for them.
• Reinforce the need for bite avoidance measures.
• Advise the need to mention their travel history if they develop a febrile illness up to a year after returning from their trip.

Where the nurse is unsure because of complicated itineraries or other risk factors there are advice lines specifically for healthcare professionals that they can ring – see resources.

Lifestyle advice

As mentioned earlier, it is important that the traveller understands that their lifestyle while abroad can put them at risk. It is as important to discuss issues such as food and water precautions, sun care, accident prevention, altitude, deep vein thrombosis, and safe sex as it is to administer vaccinations or prescribe antimalarial drugs. It would be impossible to give all the advice in depth so the broad topics should be mentioned and then written material given for the traveller to read later. Practices may choose to compile their own information sheets but many leaflets are available free from the Department of Health (see resources) or material can be printed from TRAVAX.

Documentation

Once the advice and vaccines have been given it is vital that they are properly documented. Record all advice, vaccinations and chemoprophylaxis recommendations in the patient’s records. Be specific about the exact brand of vaccine given so that it is clear which product the patient received to anyone advising in the future. Give the Patient a record of their vaccinations and encourage them to keep it safe and bring it whenever they attend for
vaccination, whether this is at a Travel Clinic, their General Practice or Occupational Health. Suggesting they keep it with their passport may help them to avoid losing it! Remind them when boosters are due – consider a recall system for completion of courses of vaccines such as Hepatitis A and B. Once primary courses of these vaccines have been completed there is increasing confidence that in general travellers will not require further boosters thus it is in everyone’s interested to complete such courses. (Consensus Groups, *Lancet* 2000 and 2003.)

**Resources**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Details</th>
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<tbody>
<tr>
<td></td>
<td>A copy was sent out to each GP and Practice Nurse when the book was published but extra copies can be purchased through The Stationery Office (TSO) stores.</td>
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<tr>
<td></td>
<td>Can be purchased from TSO stores</td>
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<td></td>
<td>This is a very useful resource especially for those that do not have computer access in the treatment room.</td>
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<tr>
<td>Leaflets</td>
<td>Such as: Health advice for travellers - T6</td>
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<tr>
<td></td>
<td>Think Malaria</td>
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<tr>
<td></td>
<td>Travel Safe (re HIV)</td>
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<tr>
<td></td>
<td>available free from: DOH, PO Box 777, Nottingham, NG15 0DU</td>
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<tr>
<td></td>
<td>Tel: 08701 555455</td>
</tr>
<tr>
<td>Telephone Advice lines for Healthcare Professionals</td>
<td>National Travel Health Network and Centre (NaTHNaC) (9-12 Mon-Fri)</td>
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<tr>
<td></td>
<td>020 7380 9234</td>
</tr>
<tr>
<td></td>
<td>Malaria Reference Laboratory - 0891 600350</td>
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<tr>
<td></td>
<td>Hospital for Tropical Diseases, London 09061 337733</td>
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<tr>
<td></td>
<td>Liverpool School of Tropical Medicine 0151 708 9393</td>
</tr>
<tr>
<td>Web-sites</td>
<td>WHO - <a href="http://www.who.int/index.html">www.who.int/index.html</a></td>
</tr>
<tr>
<td></td>
<td>Foreign and Commonwealth Office - <a href="http://www.fco.gov.uk">www.fco.gov.uk</a></td>
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<tr>
<td></td>
<td>Web-site for the Centre for Disease Control and Prevention (USA) - <a href="http://www.cdc.gov">www.cdc.gov</a></td>
</tr>
</tbody>
</table>
References
Cossar, J. Reid, D. Fallon, R. et al A cumulative review of studies on travellers, their experience of illness and the implications of these findings. *Journal of Infection* 1990: 21; 27-42
Carolyn Driver is chairperson for BTHA council.

ACCESSING THE BEST TRAVEL HEALTH DATA

Books are essential information, these include:
- *The Green Book, The Yellow Book, International Travel and Health from the WHO, the guidelines on malaria prevention and MIMS.*
- Good atlas and wallcharts such as the one in GP. Others are:
- Scottish Centre for Infection and Environmental Health (SCIEH) information is available at [www.travax.scot.nhs.uk](http://www.travax.scot.nhs.uk) A database is produced by MASTA (Medical Advisory Service for Travellers Abroad). It is available at www.masta.org and can be expensive, although substantial discounts can be negotiated. [www.gponline.com](http://www.gponline.com) for a full list of resources.
- Good web-sites include the open access sister site to Travax called Fitfortravel ([www.fit-fortravel.scot.nhs.uk](http://www.fit-fortravel.scot.nhs.uk)),
  the DoH site ([www.doh.gov.uk/traveladvice/index.htm](http://www.doh.gov.uk/traveladvice/index.htm))

THE RETURNED TRAVELLER WITH A CASE OF PERSISTENT DIARRHOEA

A backpacker spent three months travelling around the Indian subcontinent. He experienced two quite severe bouts of diarrhoea during the first two months when he would open bowels up to 12 times daily. Symptoms settled spontaneously after 48 hours. Two weeks later diarrhoea returned six times daily with unformed light-coloured stools, abdominal bloating, borborygmi and excess gas, but no blood in the stool. Symptoms persisted, and the GP.
- Blood in the stools is a worrying sign because of the possibility of tropical infection. The commonest cause of traveller’s diarrhoea is viral gastroenteritis. Viral disease and bacterial causes of diarrhoeas are invariably self-limiting. Diarrhoea that persists after returning from the tropics is more likely to be due to a parasitic agent and probably Giardia lamblia. Giardia lamblia is the
likeliest parasite to cause persistent diarrhoea following tropical travel. A persisting diarrhoea for which no obvious cause can be found but that appears to have been precipitated by travel to the tropics and which will gradually settle. Entamoeba histolytica may be asymptomatic but can cause diarrhoeas usually producing colitis with blood and mucus in the stool.

**Investigations**
A full blood count is recommended. Microscopic examination of stool for ova, cysts and parasites is required. Most enteric bacterial pathogens are identified in the first stool specimen examined, as are eggs of intestinal helminthes. Giardia and strongyloides may require three or more stool samples before they can be found.

**Treatment**
Empirical treatment with tinidazole for a presumptive diagnosis of giardiasis may relieve the symptoms; the adult dose is 2g taken on each of two evenings with a five-day gap in between the two doses. In patients with an eosinophilia and persisting diarrhoea, a three-day course of albendazole 400mg once daily is unlikely to do any harm and may help. Ciprofloxacin, 500mg once daily can be taken in those who have diarrhoea while away; a second dose of 500mg after 12-hours can follow if the first does not work.

**Drugs to Treat Acute Diarrhoea when there is no blood in the stool**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Available as</th>
<th>Strength/form</th>
<th>Adult dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>Lomotil</td>
<td>2mg caps</td>
<td>15-60mg 3-4 times daily</td>
</tr>
<tr>
<td>phosphate</td>
<td>Kaolin and morphine mixture</td>
<td></td>
<td>Initially 4 tabs followed by 2 tabs 6 hourly</td>
</tr>
<tr>
<td>Loperamide</td>
<td></td>
<td></td>
<td>10ml every 4 hours in water</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Initially 4mg, then 2mg after every loose stool; usual dosage 6-8mg daily</td>
</tr>
</tbody>
</table>

**HEALTH TIPS FOR THE RESPONSIBLE TRAVELLER**

- Sexually transmitted diseases are particularly linked to travel. **Avoid unsafe sex** to protect yourself and your partner.
- Flu epidemics in susceptible local populations have been linked to tourism (e.g. cruise ships). If traveling in a group or on a cruise, **get vaccinated**
against the flu before you leave.

- Sharing a cold is particularly easy when in crowded conditions such as a market or on a bus, therefore. Try to avoid spreading your cold by washing your hands with soap and water and limiting personal contact with others.

- Diarrhoea or gastrointestinal disorders are very common ailments among travellers. Bring anti-diarrhea medications and to retain the same high-level of hygiene that you would at home to avoid infections.

- Poor working conditions of tourism employees often have severe health implications, such as frost bite or decompression sickness in scuba guides. Stay aware of possible health problems with your assistant and help them get the proper medical attention if necessary.

- Leave time before vacation to consult a travel doctor for the necessary

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**PRISTINE – A BREAKTHROUGH IN PORTABLE WATER PURIFICATION**

Pristine is a new state-of-the-art water purification system. It is a quick and easy two step process to turn suspect water into purified drinking water in just 15 minutes.

To activate, simply mix equal amounts from the bottles in the kit and add to your water supply. Within 15 minutes the activated chlorine dioxide effectively kills bacteria, viruses, and protozoa. Pristine also oxidises many other harmful contaminants while enhancing the taste of your water.

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“Not to hope for things to last forever. Even the hour which snatches a nice day away”. – Horace 65-8 B.C.
A STRANGE SCOTTISH AFFLICTION

I. B. McINTOSH

Travel health professionals should be aware of a highly contagious condition unique to Scotland. Pre-travel advice ought to include a health warning to tourists venturing north in to the wild, highlands of the Gael. It affects teenagers and the not so young, predominates in the male, although more young women are being affected. The disorder can be acute or chronic and in more severe presentations can threaten life and limb. Acute attacks can bring spontaneous recovery in months but the chronic state can last a life-time. Death will overtake some before it runs its inevitable course.

Epidemology

First identified by a remarkable Victorian adventurer, Sir Hugh Munro, the syndrome was named in his memory. A rare occurrence for many years, the Great Depression of the 1920s saw many of the unemployed succumb and besotted, some wandered off into the wild wastes of the Scottish Highlands never to be seen again. Commando training in Argyll in the Second World War exposed military conscripts to this affliction and brought many Englishmen and Europeans in first contact with this strange malady. Some survived war campaigns, only to fall victim to the terror of the heights.

Social and sexual emancipation and improved transportation place more of the population at risk and the ailment is spreading insidiously across the land. It now affects every social class with continuing erosion of the male sexual bias. Young, enthralled women are falling within its clutch. Once enmeshed, few seem to be able to escape this disturbing affliction. Although exposed to the same malign, contagious environment local populations appear to have developed some immunity and ghillies, shepherds, map surveyors have an acquired immunity.

Incidence

The incidence appears to peak in the late teens and early twenties but can take a chronic course in a few, which continues into and beyond middle age. Stoics with fused knees, arthritic hips and incipient angina can be seen struggling to meet objectives ordained by the disorder. Initially Scots were most vulnerable but symptoms are now regularly found south of the border with a few scattered cases reported from near Europe.

The condition is life threatening with associated deaths reported regularly in the affected. Acute side effects are common in the musculo-skeletal system, with sprains, strains, bruises and broken bones. Longer term effects result in osteoarthritis of lower limb joints.

Like smoking addicts, those with the compulsion maintain their bizarre behaviour despite evidence that their actions are harmful to health. The affected are disabled by an obsession which can interfere with work and social life, destroy marriage and severely strain the most stable of marital and sexual relationships. The partner, powerless to intervene, has to watch dreaded
fixed beliefs take firmer hold on the loved one. Ever more frequent absences from home occur in the quest for symptom relief. Some of the jilted believe another woman /man is involved, but the grand compulsion makes greater demands than any new lover. Social effects are minimised when partners suffer together.

An obsessive/compulsive disorder

Support Clubs have been established to provide advice and support for sufferers and families, and publicise the dangers inherent in an apparently benign preoccupation. Despite worthy intent, most support groups degenerate into convivial free-drinking associations debased by the afflicted who have a predilection for alcohol. Emergency medical services have been expanded and volunteers and RAF rescue teams risk life and limb in support of crazed individuals who expose themselves to physical injury, climatic extremes and the perils associated with high mountains.

Those blissfully unaware of the scourge, which threatens to decimate the flower of Scotland’s youth, should be warned of this obsessive/compulsive disorder which results from recurrent exposure to high altitude in the Scottish Highlands. Many of the fit and young submit themselves to intense exposure and overactivity for a year and finally free themselves from the compulsion. Sadly, in a few cases the cycle restarts with a repetition of symptoms to further blight a young life. Paradoxically, with the passing of the years, smoking and obesity lead some to salvation and they finally escape the clutches of the dreaded disorder. Breathlessness and angina can prevent over-exposure and encourage a blessed return to an obsession-free existence. Often, with advancing years; this strange psychological state burns itself out and the very elderly can finally escape the burden of its influence. A few with cardiac transplants and post coronary – bypass surgery still yield to the malignant inner driving force and expose themselves repeatedly to a cyclic process which will ultimately hasten death.

Affecting only those who venture above 3,000 ft of altitude in Scotland (inability to comprehend metric conversions is a common failing in sufferers) the syndrome is never contracted across the Anglo-Scottish border, although Sassenachs meandering over the Scottish Highlands do succumb and often exhibit more rabid features of the affliction. The risk-averse avoid exposure if aware that the malady never takes hold south of the Highland Boundary Fault, or east of the Grampians and they are safe if never venturing north beyond a demarcation line drawn from Stonehaven to Helensburgh. It does have effects beyond mainland Scotland to Mull and Skye however, with the latter location recording many related deaths.

Fist calamity

In 1881 Sir Hugh Munro became the first recorded casualty of the disorder. He explored the tops of most of Scotland’s high mountains and recorded the heights of those over 3,000 ft above sea-level. Unwittingly his actions were to prove contagious and affect many deluded followers, who possessed, compelled and obsessed have followed in his footsteps, their eyes fixed on the
summits of nearly 300 high mountains – lofty shrines to Munro.

These deranged acolytes are recognised by their fixed ideas. “3000 ft and above” is their rallying cry. Single-mindedly, the faithful trudge the wilds of Scotland in a quest for salvation from the onerous compulsion. Classic symptoms of the disorder mimic early dementia, with mindless wanderings over bog and moor, along return compass bearings to remote map reference points in a forsaken wilderness of rock or snow. As many of the desired peaks remain shrouded in mist or whiteout, masochism is a predominant trait in those deranged people. They exhibit tunnel vision ignoring smaller scenic peaks for an undistinguished mound, which happens to be a few feet higher than the decreed parameter. They often view the mist and miss the view. Most are incapable of pronouncing the Gaelic names of their lofty objectives.

Exposed to bone chilling cold and breath wrenching gale, usually in mind-blowing solitude, these creatures drive on to new heights of illogical absurdity. Along knife-edge crests, across shattered pinnacles, under beetling cliffs, over steep slopes and screes they struggle, clutching the book of Munro’s Tables with the fervour of the evangelist holding the bible.

Strange symptoms

Some are compelled to climb the mountains in straight lines from east to west, or west to east. Some climb them in one mission from north to south, others do so, all in summer, or more dangerously, all in winter. Some handicap themselves further by strapping strips of wood to their feet and sliding over snow-bound slopes. A few squander their inheritance, or sell their homes to undertake a continuous attack on these mountain mammoths. They become totally committed to their miserable fate and demonstrate other symptoms of physiological and psychological disturbance. They develop visual dysfunction in summer and snow blindness in winter from squinting upwards at distant peaks. “Munro neck” develops from repetitive upward gaze, “Munro ankle” from running over boulder strewn screes and “Munro-baggers gait” from hitting the summit in the shortest possible time. There is also the Munro bore who occupies a choice corner in the Highland hostelry and relates hoary tales of Munros scaled and mountain terrors which have befallen them.

Some of the most disturbed deny any suffering and suggest they climb for exercise, to commune with nature, to see the view, or to get away from the spouse. Others rationalise by referring to, the challenge, or the achievement; attitudes not held by the normal person, who would not exchange the comforts of the fireside for a miserable struggle up steep interminable slopes, along gale swept ridges to unremarkable, protuberant prominences, relics of a glacial past and the granite back-bone of Scotland.

A personal affliction

Unaware of the danger inherent in recurrent exposure to the high Highland scene I succumbed to the dreaded disorder at the age of 11 and finally rid myself of the obsessive/compulsion 40 years later when the summit of the last Munro was finally attained. Physically the process had worn out knees and hips but the psychological impact was subtle. Over time I had deviated into the
company of those similarly affected and the peer group support of those exhibiting similar peculiar behaviour. One companion, a post cardiac surgery devotee in the throes of a fourth inexorable cycle of compulsion, is struggling ever onwards and upwards to ultimate demise, still lacking the insight to appreciate the incongruity of his behaviour.

**Treatment**

There is no certain treatment for this condition and prevention is better than cure. Avoidance of the afflicted and all exposure to Scotland’s highest mountains is the only certain way to dodge this devastating phenomenon. Risk factors for infection need to be publicised and the general public warned of the dangers lurking for the unwary in Highland affrays. Never to set foot on Scottish hills guarantees immunity. Some have tried behaviour therapy to break from the clutches of this addiction. Aversion therapy uses the presentation of photographs of the Munros to the individual, with concurrent administration of increasingly severe electric shocks. This regimen has been criticised on the grounds that treatment is no more painful than that experienced during the compulsive hill activity. A morbidity register of those with the disorder is maintained by the Scottish Mountaineering Society. The list of those who have audited the full cycle of their compulsion and have lived to reach their ultimate summit now runs in to thousands, with many more unwilling to record their deviant ways and attainment of the final goal.

Increased leisure time and affluence suggest that ever more people will be exposed to this demon of the hills. The time may perhaps have come to curb this malignant influence by creating a quarantine exclusion zone north of a line from Stonehaven to Helensburgh. Beyond this Highland Line, health warnings should be displayed “Avoid climbing on the high mountains and prevent spread of a peculiar, virulent Scottish disease”.

IAIN B. MCINTOSH,
*gp in St Ninians, Stirling.*
A SEABORNE GENERAL PRACTITIONER
(THE SAME – BUT DIFFERENT)

J. McWILLIAM

There is some benefit, after all, in being a British trained general practitioner. It provides opportunity to take one’s knowledge and experience to the polar regions of Greenland and Iceland, even Newfoundland and Labrador, not to mention the other end of the world, Antarctica. The setting is however, somewhat different from a standard general practitioner’s consulting room since these trips are as ship’s doctor, on relatively small Russian ice-reinforced vessels, which carry from 32 to 49 passengers and 20 Russian seamen. There is a small hospital on board the vessels and the doctor sleeps, either in a small room off the hospital or in the cabin across the passage.

In addition to a medical qualification, the chief essential for such a post on board, is the ability NOT to suffer from “mal de mer”. The seas between Iceland and Greenland and between the Falklands and South Georgia can be a bit rough. The Drake Passage, has been known to have its calm moments but these are uncommon. The next qualification is to have some working knowledge of at least one European language. After that, it is relatively plain sailing and lots of fun. There is always the opportunity to learn Russian along the way. A Russian/English dictionary is usually somewhere on the bridge but it is not very up to date and consists mostly of maritime terms.

Although there are basic drugs and equipment on board the ships, by the end of a sailing season, which depends on weather and ice conditions as well as time and passengers’ needs, these essentials are becoming depleted. It is preferable for the wise incoming doctor to bring his/her favourite medications. A list of onboard drugs is often provided for the doctor, sometimes in Dutch. The vessels are victualled in the Netherlands. This may lead to problems but not as many as used to be, when only Russian medicines were available.

The BNF does not always help except in Ushuaia on the Beagle Channel, where a friendly pharmacist would like a copy for himself if you happen to have a spare one with you, en passant. The doctor is usually provided with a letter by the Dutch, who lease these vessels, confirming the appointment as ship’s doctor. This prevents any difficulty with customs people who query the extra luggage and its contents.

If stocks are getting low, there is a small seven-bedded hospital in Longyearbyen, the capital of Svalbard in the North and from here small amounts of drugs can be obtained, for cash. Any large quantities must be cleared by the University at Tromsø in Norway and must wait for the next plane. The possibility of obtaining supplies from the tiny four-bedded hospital at Scorsebysund in East Greenland, is even more problematic. There, supplies for hospital and domestic use must be ordered a year in advance, for the annual supply ship to bring to the little harbour, ice permitting. Many medical problems there, are treated by the staff from Denmark. Anything that cannot be handled must be transferred by the newly established helicopter service to Konstabel Pynt (point), some 50 miles up the Hurry Fjord and then flown to
Iceland. The crossing of the immense Greenland ice cap, the second largest in the world, is too hazardous for a light aircraft. In Scorseby, even graves must be prepared in the summer, when the permafrost is less, for those who may die in the severe winters which are normal along that coast.

In the Southern latitudes, there is a hospital at Ushuaia on the Beagle Channel. This is well stocked for an increasing population in this large town and its environs. The next hospital is at Port Stanley, in the Falklands. There is a very efficient, fully computerized pharmacy in this port for any supplies which cannot be obtained at Ushuaia. These are paid for by the shipping agent. The next tiny hospital is at Tristan da Cunha, which liaises by email and phone, weather permitting, with some hospitals in South Africa. There is a slightly larger hospital at St. Helena. The main clearing station for gross injuries or illness is Ascension Island, whence casualties from all over the South Atlantic are sent back to the UK by the twice weekly Tristar aircraft. There are very, very few vessels in the South Atlantic and certainly no helicopter evacuation facilities, unless a vessel from any of the world’s navies that happens to be in those seas is fitted with a helipad.

As far as the practice of medicine on board is concerned, passengers are presumed to be healthy before joining on these expeditions, but many come with a list of past medical problems. These are not cruises in the recognized sense of the word, but real expeditions. Sea and land conditions and places for exploration can vary tremendously. People are expected to be fit enough to cope with rough seas, using the gangway to descend into and return up, from a ‘zodiac’ inflatable boat which will be bobbing about on the sea. There is always an experienced Russian crewman at the bottom of the gangway to help, with the correct ‘seaman’s grip’ and the driver on the zodiac is there to assist as well as drive. Thank heaven that the practice of using a rope ladder to get into the zodias no longer occurs on these vessels! It is a bit awkward feeling for the next rung through ‘wellies’.

Strict attention is paid to fire drill, lifeboat drill and evacuation procedures and the doctor is expected to attend and give any advice to passengers at particular risk. The doctor is also expected to keep an eye open for correct clothing to be worn by the passengers going ashore, especially for waterproof boots and trousers. Even on shore, these boots are essential since streams and marshy area will be traversed, when away from a relatively dry shoreline. The doctor is also expected to go ashore with a minor first aid pack, in case any injury is sustained. There is constant contact by radio with the officer on watch on the bridge, who also keeps an eye on the shore, in case a polar bear awakes from sleep and becomes interested in a meal walking nearby! As a matter of principle, no party is allowed onshore unless accompanied by three leaders each armed with a gun, who have scouted the proposed area of landing. This may have to be abandoned if there is even one bear around.

Usually, the list of the next group of passengers will arrive by email or fax before they do and this can give the doctor an idea of who may require advice or assistance. Most UK passengers come well supplied and with accurate information. Would that other nationalities come as well prepared, especially with drugs lists, according to the BNF. This would reduce much head scratching and
A common medical problem for the seaborne GP is sleep deprivation, which affects passengers, crew and staff alike because of the 24 hours of daylight as well as the excitement of all the events which can occur in those 24 hours. A fairly common event is the call at 2.30am over the tannoy that there is a polar bear approaching the ship over the ice, so there is a real pyjama party on deck!

It is a rare privilege, even if unpaid, to travel as ship's doctor in both north and south polar areas and to meet someone first met on the other polar voyage or even on both! It is an addictive experience to enjoy fresh air, wonderful scenery, tremendous variety of magnificent wildlife and pleasant company in polar regions. An experience very different from UK general practice but still the stuff of general practice!!

Jen McWilliam is a gp and ship's doctor.

With acknowledgment to The Writer: for an edited version of first publication.

Every port you visit is like a surprise gift waiting to be unwrapped.
THE AIRBORNE GP
(HAVE STETHOSCOPE WILL TRAVEL)
I. MACKAY

International medical repatriation physician, a grandiose title and on first impression a role promising a passport to expenses-paid global travel, the opportunity to visit exotic places and while away hours on Pacific beaches. On occasion the promise is fulfilled, bringing a lengthy stop-over in a quality hotel in Bali, Singapore or Capetown. More frequently the reality is exposure to organisational failure, cancelled flights or deterioration in the patients condition. These disruptions dump the medical escort for several days into the tiny backroom of inferior accommodation in a deserted, out of season tourist venue swept by freezing winds or torrential rain. No one will speak English, the TV will not work, room-lights are too dim to read, the heating if any, will be spasmodic and the restaurant leisure and pool facilities will be absent/closed for the season/the winter/repair, or for good. It is then one wonders about the dubious perks that come with the job.

Despite advanced electronic communication, fax and telephone links, communication failures often bedevil the task of patient transfer from overseas hospital to UK destination. The initial request for medical support for repatriation, relayed from the holding hospital through the insurance agency via the ambulance company undertaking the land transfer, may arrive a few hours or a day before departure. Details are usually limited to destination and time of departure. This can be misleading, for Calgary, Alberta can turn out to be Cagliari, Corsica and patient details if provided will be scanty.

On limited information the doctor has to decide whether to accept a job of uncertain destination and duration, to accompany a seriously ill patient exposed to the hazards of global air travel. An example of one confusing case report follows:

Case report
Notes to a medical escort regarding the transfer of a hospitalised patient from Spain to UK.
21/05/01
A bad (TP) doesn’t want to give information, even he “suggests” Pax to be moved to private clinic. Currently, Pax is in bad general condition, no RPT possible.
Please, we won’t do control Mr providing the TP’s bad mood, you regular sc to know when Pax is D/C to get the D/C MR and arrange RPT according with it.
Please, advise Pax he is not admitted uselessly and that we’ll arrange RPT a soon it is possible.
I want the D/C MR will be given to Pax timely.
03/06/01
D/C Received
Pax suffered casual fall in a situation of possible acute etilic intoxication.
Closed serious craneoencephalic traumatism + subaracnoidal haemorrhage + right clavicle fracture + left ribs fractures, date of DX 15/5.

Currently splint in right shoulder = aphasia of understanding + general flaccidity.
OK RPT in all-seated business + Dr. Escort + whce until sit + amb + 2 ends to hospital with neurosurgery service.

Further information was requested by the medical escort and little more was forthcoming from the hospital, other than that the patient was fit for discharge, wheelchair ambulation and flight transfer to the UK.

The escort insisted that the history and the patient’s clinical status was clarified and verified and questioned whether the patient met the criteria for air passage to the UK.

4/6/02 – Despite this request all the arrangements were made by the company for the transfer to take place. However understandably the airline refused to carry the patient until he was fit to travel.

5/6/02 – The patient deteriorated and died in Spain.

The majority of air repatriation movements use nurses as escorts and only transfers with high clinical risk engage doctor support. Once the doctor’s name goes forward there is no turning back, as transfers, tickets and special air line provisions for invalid transport are put in place. Doctor and patients become pawns in a process involving the insurance company, airline officials, land transportation agents, foreign hospitals, overseas doctors, the patient’s spouse and hotel staff. These arrangements will be made in several languages.

The difficulties of air transit have been compounded by increased security. In this environment there can be mistranslations, misunderstanding and mistakes and in my experience if they may occur, they will. Reassured by the insurance company that the repatriation programme is seamless one arrives at the airport to find that the tickets are not there, or yours is and the patient’s is not. Often tickets are there but cannot be released until the insurance company pays for them, which usually requires even more frenzied telephone calls. The transaction finally goes through as final gate access is being announced, with security clearance still to come.

Security authorities love medical kits which brighten the officials day. They enthusiastically hunt for forbidden sharps and blades with irrational zest and have confiscated blunt ended plaster cutters, yet routinely allowed the passage of scalpel handles and separately boxed blades. One formidable German security guard insisted on retaining a 2 inch pen knife – a long forgotten item in the kit – but, when finding a full bladed scalpel returned it as the name did not appear on her list for confiscation. Surprisingly the complex electronic oximeters, defibrillators and paraphernalia also in the kit receive scant inspection.

Useful Resuscitation Kit

A standardised emergency kit is available for CPR. The Boscarol emergency
The emergency bag

The bag contains a Merlin reusable resuscitation bag and mask complete with oxygen reservoir and tubing, a Res-Q-Vac emergency manual respirator, selection of airways, disposable gloves, a biohazards bag. The Res-Q-Vac is a hand powered suction device with a fluid capture canister and a rigid catheter. It is designed to protect user and patient from contamination with body fluids in either direction. An airways mask and bag are packaged to pop up into full size with a gentle squeeze and there are c 3 sizes of supplied airway. This kit with an appropriate selection of emergency use drugs will cater for all basic emergencies. www.wmspic.org/gpmagazine

En route

Struggling at last and the last, on board, one can relax and wonder about inevitable flight delays and reroutings until the hub airport is reached. Any major delay or change of flight places the doctor firmly in the grip of systems outwith personal control. The emergency contact telephone number with the insurance company when used is unmanned, or a new member of staff is on duty and knows nothing of the repatriation and officials are away from their desks. When really needed, mobiles seldom seem to find a signal. Getting self, kit and patient from A to B and C suddenly presents almost physically insurmountable obstacles. The organisation falls apart, usually in the small hours of morning, in a strange, deserted, unknown airport after a prolonged journey cramped in a second class seat. Aeroplanes are delayed and rerouted to a different airport than the one where the taxi purports to be waiting. Taxi drivers arrive late, not at all, or wait at the wrong exits. They delight in standing at the arrival gate carrying a placard which has the wrong name on it.

On arrival

Even after a trouble-free flight difficulties can present at the destination. A wise doctor endeavours to see the patient soon after arrival but one can be transported to a wrongly named hospital, or the right named hospital in the wrong town. In the appropriate hospital the staff often fail to accept they have a patient for you. The individuals name may be incorrect or they are in a different department or ward or, while the doctor was on route they have been transferred or died.

At last united with the patient, one finally can discover their true clinical state. Hospital staff are intent on discharge of the patient to clear a bed. Foreign doctors often have a distorted view of what clinical conditions may be acceptable to air carriers and how soon after major surgery they may repatriate the patient. Sometimes the patient may even have been discharged before the escorts arrival.

One is faced with a patient desperate to return home, but transportation
status is outwith the universally accepted air carrier guidelines. Patients and spouses are often psychologically distressed by the events which have befallen them and anxiety states often require more input from the escort than the medical cause for repatriation. Accompanying spouses have had a difficult time while the patient has been in clinical care. They often require more attention than the patient one has been employed to escort home. Ethically it is difficult to escape this unpaid commitment, so care is extended to 2 patients, doubling workload and worries.

Providing the patient is fit for travel and still willing to travel then, assembling ambulances, stretcher trolleys, airside ambulifts and aeroplanes are all in place and on time, return to UK should proceed smoothly. Maintaining the patient in a clinically stable condition on the way appears a minor hurdle in this process.

**The return flight**

Sadly patients and relatives have often been poorly informed of the repatriation process, have unrealistic expectations of the transfer and refuse to travel that day/night, by the agreed route or transport mode, or do not possess the clearance certificate required for air transportation. This rigmarole takes time and patience to sort out when time is at a premium before the flight departure.

One hospital in Eire discharged the patient, then would not provide the ‘permission to fly’ paper work. I was prepared to escort her, but the insurance company withdrew cover for her travel. She insisted on going home and turned up at the airport unaccompanied and took the flight. I was in the strange position of no longer having responsibility, but if anything happened on the journey, as the only doctor on board, would have had to offer Good Samaritan duty of care for her. In the event, she made an uneventful flight, but fell down the steps of the aeroplane on arrival and I had to treat a large laceration on her leg.

Landside at the foreign airport, there is almost inevitable delay. Many smaller airports have no medical rooms. Good emergency care in the immediate hours before departure can be medically demanding, when the burden of sole responsibility outweighs the financial return. Boarding brings momentary relief and the clinical challenge of repatriation which can now be met with some support from cabin staff.

With oximeters and blood pressure monitoring aids in place and oxygen at the ready, the majority of air transfers proceed smoothly. On long haul flights this can be a tense time. COAD patients suddenly become breathless and heart convalescents get a twinge of angina and panic. There is scant space in an aeroplane to deal with emergency medical problems as passageways are in constant use. One has to commandeer 3 seats to get the patient prostrated and legs elevated when hypotension suddenly occurs. Relaxation techniques are often as important as medical and medication aids in getting patient and spouse back to the UK safely.

**Home at last**

Arrival in Britain lessens tension. The NHS is now at hand if emergency
dictates and a safe repatriation is all but complete. Patients and family are always very appreciative of the service provided and usually blissfully unaware of the hazards and hurdles successfully overcome to return them home. The escort has only a local flight or car journey still to face and write up of the report before the job is complete. There is a tired, tense and jet-lagged return to the office where an answer-phone message often awaits. “There is a patient for transfer from Venice, can I make the evening flight?”

Oh well, I have always wanted to see the city and its lagoon. “Have stethoscope will travel.”

I. Mackay is a medical escort and in-flight physician employed by emergency medical insurance companies.

AIR TRAVEL AND ILLNESS

Medical situations which require clearance (from airline) or which exclude air travel:

- Uncomplicated MI within past 10 days.
- Commencement of anticoagulation therapy.
- Major chest surgery within previous fortnight.
- Pneumonia.
- The need for continuous oxygen support.
- Abdominal surgery within 10 days of flying.
- An epileptic seizure within 24 hours of a flight.
- Brain surgery or a cerebrovascular accident (stroke) within 10 days of travel.
- Otitis media/sinusitis.
- Middle ear surgery within 10 days of a flight.
- Unstable psychiatric diseases (unless escorted by qualified personnel).
- Pregnancy beyond 36 weeks.
- Infective stage of any infectious disease.
- Within 24 hours of having a plaster applied following a fracture – unless the plaster is bivalved.
- Scuba diving within 24 hours of a flight.
I worked as a locum for a surgeon in Segbwema, Sierra Leone, for a short time, long before the recent terrible Civil War in that country. The people were delightful, cheerful and willing to help. Some were able to speak English, but most only spoke native languages of which there are fourteen. It was necessary to have an interpreter when working in the out-patient department or on ward rounds. We saw many diseases that are rare or unknown in the UK; of these Lassa Fever was the most unexpected.

**Lassa Fever**

I was unaware of the frequency and danger of Lassa Fever, when I arrived in Segbwema. The epicentre, Lassa, was in a local village. A British midwife from a neighbouring unit had recently been treated for Lassa fever at the Nixon Memorial Hospital with care and devotion. She recovered sufficiently to be air-lifted by helicopter to Freetown and then flown home in an “isolation bubble” for definitive treatment. My first acquaintance with Lassa Fever was on a ward-round, the day after my arrival. In the isolation ward I was shown a lady with an abdominal tumour and asked to do an exploratory laparotomy. (I was the only doctor with an FRCS in this part of Africa.) I shall always be grateful to the senior (African) surgeon of the hospital who said “Don’t touch her – she has Lassa Fever. A previous surgeon at this hospital sustained a needle-stick injury when operating on such a patient, was infected and died rapidly of the disease”. I took his advice, refused to operate. She was discharged the next day and died peacefully at home soon afterwards.

Lassa Fever is spread by a small rat, the multimammate rat (*Mastomys nataliensis*). The virus is excreted in the urine, and humans are infected if food is contaminated this way. Lassa Fever is also spread, as mentioned, by infected blood and like HIV by sexual intercourse. It is not spread by droplets, and patients with this disease can be nursed in a general ward, although this was not known at the time I arrived in Africa. Diagnosis is by blood examination. I later came to treat a number of patients with the disease, and took due precautions. The disease is associated with internal haemorrhage and is specially dangerous in pregnancy. Good response is obtained with the anti-viral, Ribavirin, and probably also with hyperimmune globulin.

**Burkitt’s Tumour**

Burkitt’s Tumour is another condition not seen in Europe but is probably the commonest malignant tumour in Africa. It is certainly the commonest malignant condition in childhood. We saw a boy aged four where the tumour had arisen in the maxilla and destroyed the eye. Fortunately this tumour is very sensitive to chemotherapy with cyclophosphamide. Treatment may cure the condition. Burkitt’s Tumour occurs in malarial regions (mainly those where *Plasmodium falciparum* occurs) and is associated with the Epstein-Barr Virus. Much later I met Dr. Denis Burkitt. He told me about his discovery and description of the
condition – but at that time no pathologist would accept his report. He stated that the specialists at home would not believe that he, a mere mission doctor in Africa, could diagnose a then unknown malignant condition.

**Tuberculosis**

Tuberculosis is common in the developing world, and has recently become an even greater problem, not only because of the emergence of drug-resistant strains of the organism, but especially because of HIV. At the time when I was in Sierra Leone, the AIDS epidemic had not yet reached our region.

X-rays were not available at the hospital where I was working (or indeed at most hospitals in Sierra Leone). Diagnosis of tuberculosis was by clinical examination and sputum microscopy. Some specimens were sent to Britain for sensitivity to anti-tuberculosis drugs. Patients were treated with bed-rest, good food (relatively) and anti-tuberculosis medication. Surgery was not possible – without the facilities available in Western hospitals. A major problem is that once patients become fit to be discharged they tend not to take their medication. They sell the tablets in the local market and in this way obtain money for food. They would still be too weak to work gainfully. It has therefore become important that all drugs are given by reliable nurses or assistants, the Direct Observation Treatment or “DOT”.

**Pyomyositis**

Pyomyositis is a pyogenic infection of muscle. It is a tropical – condition, the aetiology is obscure, although a single case has been reported from St George’s Hospital in Tooting (London). A patient came to the Nixon Memorial Hospital with a huge painful swelling in his biceps muscle. Incision drained 1,700 ml of pus. He was treated with antibiotics and made an uneventful recovery. This patient made me wonder whether the much debated last illness of Mozart could have been due to pyomyositis.

**Eye Conditions**

A lad reported to me in the Out-patient Clinic. In a feud with another lad his face had been attacked with the spine of a porcupine. Damage had been done to the eye, and I referred him to the Ophthalmologist at Bo hospital.

**River Blindness**, due to onchocerciasis, is prevalent. The filaria causing it (*Onchocerca volvulus*) are spread by the Black-fly (*Simulium damnosum*), known locally as “The Oncho fly.” The fly breeds in stagnant rivers and does not fly long distances; hence the name of the disease. Following bites from the fly the parasite develops and its larvae, the microfilaria, spread widely in the bloodstream and invade all parts of the eye, as well as the skin causing severe itching. There it can be easily diagnosed by “skin-snips”. The snips were taken in our laboratory. They are put on a microscope slide, with a little saline and under the microscope the microfilaria can usually be seen. The parasite itself produces small lumps. They should be excised and in them the parasite can be seen and recognised under the microscope. Great efforts are being made, especially by the Royal Commonwealth Society for the Blind (now Sight Savers International) to eliminate this cause of preventable blindness. After I left,
Ivermectin was found to kill the parasite. Only one dose a year need be taken (though some advise more frequent doses).

**Obstetrics**

Complications of childbirth are common in the developing world. Ante-natal care is unusual except from centres such as ours. It was interesting to see the midwives teaching the importance of ante-natal attendance and care with songs and dances. Apart from the routines in Europe, the mother is vaccinated against tetanus, as neo-natal tetanus is deadly. It results from application of soil or straw to the umbilicus of the baby to stop bleeding.

Difficult deliveries were usually performed by the midwives using the Ventouse extractor. I had to perform Caesarean Sections most days, sometimes combined with tubal ligation. I shall always remember a lady with very severe toxaemia. Caesarean Section was under local anaesthesia. The nurses were able to resuscitate the mother and baby with success. I received a letter from the mother stating: “My friends say I must be a ghost, because nobody who was as ill as I was ever survives.”

One of the most unpleasant complications of pregnancy is the vesico-vaginal fistula. It is a complication of obstructed labour, when the foetal head compresses against the bladder, causing necrosis of the intervening tissues. The girls, commonly young girls with a first egg pregnancy, will leak urine continually. The inevitable result and specially the unpleasant smell, frequently lead to their expulsion from home and their husbands to abandon them. Operative repair is difficult – and only one hospital in this part of Africa (the Vesico-Vaginal Clinic in Ethiopia) specialises in these surgical repairs. Diagnosis of this type of vaginal discharge is by instilling a small amount of gentian-violet into the bladder, under general anaesthesia. The dye rapidly appears in the vagina.

**The Children’s Ward**

We saw many children with malnutrition or with Kwashiorkor. These conditions differ. Malnourished children are thin, wasted and ravenous for food. Kwashiorkor, often starts acutely within a few days. It is due to inadequate protein and calories, often started by early as weaning. The children, apart from being small and wasted have a swollen abdomen, skin rash, oedematous limbs and often red hair. They are apathetic and do not willingly eat. Treatment is by careful increase in diet. Mothers are taught the value of beans, as these are rich in protein and meat is rarely available. Locally a preparation (“Benemix”) containing beans, fish, palm oil, iron and vitamins is a good nutrient. On cold days mothers are admitted with the ill child in the same bed for warmth. Two patients in one bed seems contrary to good English nursing practice, but may be life-saving in Africa!

Whooping cough, measles and neo-natal tetanus are common. Surprisingly diphtheria seems to be almost unknown in the tropics. I have asked why this should be, but have been unable to find out. Routine immunisation of all children is a high priority.

Polio is unfortunately common. Many beggars in the streets of Africa
have withered limbs, presumably due to this condition. The son of our steward limped with an atrophied leg. His father told me that evil spirits were responsible for his misfortune!

I attended an Infant Welfare Clinic. Babies were weighed and mothers were given advice. Many mothers had walked long distances over bush-paths with their babies on their back for their “jabs” and polio drops. Unfortunately the vaccine was useless. The refrigerator, where the vaccine is stored, had run out of fuel (paraffin) three weeks previously. The mothers were asked to come back in three weeks, when it was hoped new supplies would have arrived. One wonders how many mothers returned?

Conclusion

Travellers to Africa are subject to all the conditions common in Europe, as well as, of course malaria, and other tropical diseases. Conditions vary according to the places visited. Medical personnel should enquire about prevalent conditions; some of them encountered in Sierra Leone have been outlined above. Unfortunately road traffic accidents are common in many developing countries and may result in a large number of casualties, as the local buses are often overloaded and badly maintained.

A health worker visiting Africa will find much of interest in this fascinating part of the world. He, or she, may be called upon to treat conditions never seen at home.

References

1 Fisher-Hoch SP, Craven RB, Forthall DN, Scott SM, Price ME, Price FM, Sasso DR, McCormick JB. Safe Intensive Care Management of a severe case of Lassa Fever with simple barrier nursing techniques. *Lancet* 1985; 1227-1229. (The word “simple” is rather an exaggeration. The treatment was anything but simple. The article mentions that the nurse was deeply unconscious for six days and that she needed a tracheostomy, among much else).


_Gus Plaut is a retired gp and surgeon._

The therapeutic situation –

Two anxious people with the therapist preferably the one that isn’t.
MEDICAL SUPPORT FOR THE GREATEST SHOW ON EARTH

A. CLEMENTS

The Sydney Olympics and Para-Olympics involved 11,300 athletes, 5,100 officials, 3,000 Volunteers, 15,000 press, 400,000 visitors daily to the Olympic venues and up to 1,000,000 extra people in Sydney daily. These huge numbers required the biggest Public Health Program ever devised and implemented.

The New South Wales (NSW) Health Olympic Co-ordinating Centre was set up with input from and liaison with the:
State Emergency Operations Centre; New South Wales. Department of Health; NSW Ambulance Service; NSW Health Services Disaster Control Centre; Medical Commission; Medical Co-ordination Centre; The Media Centres and Area Media Officers.

Participating as required were: Food Safety Co-ordinator; Environmental Health Liaison Officer; VIP Co-ordinator; Public Health Units and Co-ordinators; Medical Epidemiologist; Olympic Campaign Manager; Surveillance Manager in a remarkable liaison operation.

By the Olympics commencement a Health programme was in place which was comprehensive and better organised than any previously.

Services provided were: Specialist Sports Medicine facilities for athletes at competition and training venues; General Medical facilities accessible to spectators, staff media, Olympic Officials at competition events, including dental, optometry, podiatry, physiotherapy, massage and pharmacy; Medical support at press and broadcasting centres and designated Olympic hotels; Access to Olympic designated hospitals and transport to them from competition sites etc.; Provision of the first ever medically trained health care interpreter service; Data collection service for the Health Surveillance team.

All volunteers were provided with a free uniform colour coded for role identity purposes. The red for the emergency medical personnel stood out in a crowd for ease of recognition.

Health Care Delivery

A Medical officer was in charge of health care delivery to the Olympic village and another for visitors. Each competition area had a MO i/c with 2 medical teams available at each session – one, only for spectators and the other for the athletes, officials, referees, volunteers and the Olympic family.

All medical team staff, except for principals, were volunteers, and doctors were chosen, whenever possible for their links with and their medical expertise in a particular sport(s).

I was i/c Diving in the Aquatic Centre having been a judge, referee and coach of this sport up to National level, and the Honorary Medical Officer of the NSW Springboard and Platform Diving Association for a quarter of a century. I carried a 2-way radio for emergencies.

The Medical team for the Diving session included 2 doctors, a registered
nurse, 2 physiotherapists and 4 massage therapists. The physios, and masseurs were very busy all the time.

The Medical facility in the Aquatic centre was a screened-off area with 6; examination/treatment cubicles with couches, storage and scrub areas. Equipment provided included:
• full emergency equipment
• examination aids including ECG machine
• range of sterile instruments, gowns, drapes.
• sterile bandages, dressings, tapes, splints
• full range of basic drugs secured in a locked cupboard
• liniments and massage oils.

Health Surveillance
During the Games period, information on every encounter with the services mentioned earlier (other than hospital and ambulance services) was captured on a standard form including – medical and treatment record – demographic details of the patient with categorised information re the nature of the illness, health problem, or injury, including the circumstances in which the injury occurred. Every 30 minutes forms were collected and faxed from the venue medical office to the Olympic Surveillance Centre.

N.S.W. Health Olympic Surveillance System
Every day until midnight the Olympic Surveillance Centre received reports from the following:
• medical presentations from the Medical Encounters system
• environmental reports from monitoring inside Olympic venues
• ship’s medical log reports from health surveillance on cruise ships in Sydney Harbour for the Games
• WHO global reports from Global Epidemic surveillance
• food safety reports from monitoring inside Olympic venues
• director’s reports from Public Health Network – notifiable disease database
• daily data from Emergency departments of Sydney Hospitals.

All the information was collated and reviewed each morning. By 11.30 a.m. a report was produced which included a summary of the previous 24 hours, trend data and highlights of findings of interests. This was reviewed by the Olympic Surveillance team and a final report tabled by 2 p.m. for any action to be taken. Officials were looking for any trend which suggested a serious public health problem, which could then be dealt with quickly and efficiently.

Results
No outbreaks of communicable disease, food-borne disease, disease from environmental causes, public health incidents on cruise ships, mass casualty emergencies suggestive of bioterrorism: (3 false alarms).

The Public Health programme for the Sydney Olympics was considered a great success due to:
• careful planning
• comprehensive and timely public health surveillance
• clearly defined lines of reporting and communication to the peak health decision-making bodies.

Legacy
The enormous potential of near ‘real-time’ surveillance was recognised. Hospitals and G.P.s. have a raised awareness of the importance of timely reporting of notifiable diseases which is on-going.

Partnerships between the NSW Department of Health, Public Health Units, Emergency departments, laboratories and local Government have been enhanced.

The capacity to manage mass gatherings has been permanently enhanced, e.g. the Rugby World Cup competition will benefit from a tested successful system.

A Personal Perspective
The chance to volunteer for the Olympics provided an experience I shall never forget. The medical officer must be on, poolside for all Olympic Diving competitions, so that is where I spent most of my time during each shift enjoying a favourite sport. If I had purchased prime spectator seats I would have paid A$7,500 for a similar view. The great bonus however was being part of THE GREATEST SHOW ON EARTH.

Ann Clements is a GP, practising in New South Wales Australia.
VENOUS CONGESTION AND LEECH THERAPY

Editor’s Note – As a trekker in the Himalayas I often have had intimate contact with leeches or had attention drawn to their activities as blood seeps from the wound left by their departure. They attracted the wrath of this unwilling host, but they have useful clinical potential and I have used them on a porter’s wound. They are still used in some more remote communities for medical therapy and have come back into fashion in some modern European treatment centres.

Medical leeches (Hirudo medicinalis) have been around for centuries. Nowadays, they are used successfully for only a few conditions, notably to salvage tissue flaps and skin grafts whose viability is threatened by venous congestion. Bleeding in this oldest of medical practices is achieved either by venesection or wet cupping; the latter was effected by a scarifier or leech. Leech originally meant healer or physician. Application of leeches was first recorded as a therapeutic practice in the 2nd century. The practice of leeching reached its peak in the 18th and first half of the 19th century. 150 years after their near-total disappearance from clinical practice trust leeches are now used widely in plastic and reconstructive surgery to relieve venous congestion.

The Leech in Medicine

Hirudo medicinalis is a freshwater hermaphrodite, selected for medical use because it inflicts the deepest bit with the most prolonged period of post-bite blood extravasation. The creature has two suckers, a caudal one that allows them to attach to the surface which they are feeding and a cephalic one by which they bite and suck blood. About 5ml blood is consumed by the leech, ingested within 25 minutes. Therapeutic benefit comes from amount of blood initially extracted and post attachment oozing, which can continue for several hours. The leeches bite releases active substances into the surrounding tissues which include a local anaesthetic agent making the bite painless. A histamine-like substance increases blood flow to the feeding area. One component of leech saliva is hirudin, a selective thrombin inhibitor, permitting feeding for an extended period of time without clotting of blood source.

Treatment

The skin is washed with soap and water. The leech is guided to feed by placing a small amount of sucrose solution on the desired site, or by pricking the part of the body to be leeched. Feeding lasts 10-20 minutes, after which the leeches fall off the skin but the site will continue to ooze for 1-2 hours.

Leeches should not be removed forcibly, because the teeth may be left behind and may act as a nidus for infection as leeches themselves are non-sterile. Organisms isolated from leeches are sensitive to tetracyclines and trimethoprim. Trek group doctors may find the leech a useful instrument in clinical care in remote places.
Complications

Patient fear of the procedure can usually be overcome by explanation and continuing reassurance. The most serious complication is sepsis, which can be in the form of an abscess or cellulitis, occurring in 7-20% of cases. Leeches can migrate through body orifices and invade the rectum, upper airways or genitourinary tract, causing bleeding.

I.M.

MAGGOT TREATMENT OF WOUND

When horse-riding in Azerbajan the patient fell off onto a sharp piece of timber which gouged a large area of his right calf. There was limited medical support in the district so it was crudely lacerated without anaesthetic in a crude first aid-shack. A few weeks later there was limited healing with a necrotic hinged flap of skin and an open wound along the laceration with no evidence of infection. The wound was cleaned with some minor debridement and dressed.

Unfortunately, it became obvious that healing was going to be slow so it was decided to remove the necrotic tissue and continue with maggot therapy and a few were applied to the wound. During the following night he felt the maggots moving, which had affected sleep, but there was no pain. A further 24 hours and he returned to have them removed. A simple dressing was applied and two weeks later the wound had almost healed and did so completely shortly after. Trek group and expedition doctors should perhaps keep this potential treatment procedure in mind when short of medical supplies and far from conventional emergency care.

A.M.

SOLAR IRRADIATION – ITS EFFECTS AND THERAPY

Sunburn

Some 65 per cent of UV light reaches the earth between 10am and 2pm and the amount a person is exposed to increases by 4 per cent with every 300m rise in altitude.

Ice reflects 80 per cent of light, compared with 25 per cent from sand.

UV light will penetrate moist skin a lot more easily than UVB is the cause of sunburn in 85 per cent of cases and penetration is stopped by glass. UVA though isn’t stopped by glass and is the main cause of UV-induced malignant change.

Elderly skin is generally more resistant to sunburn.

Damage to eyes is also very important. There is an increasing incidence of retinal melanomas and UV-induced cataracts.

Treatment – When sunburn has occurred NSAIDs are very useful for their antiprostaglandin effect.

Topical anaesthetics and steroids are best avoided because of the increased risk of sensitisation and subsequent dermatitis.
Prevention requires reducing excessive exposure to direct sunlight especially between 10am and 4pm. Hats and clothing should be used along with frequent application of sunscreens. Sunscreens: use with care.

Improper use of sunscreens may increase the risk of the most dangerous type of skin cancer. Researchers at Mount Vernon Hospital in Northwood, Middlesex, have released data from a 13-year study suggesting that sunscreens may raise the likelihood of some people developing malignant melanoma. The link is not with the sunscreens themselves but with how they are used. Most sunscreens offer only poor protection against harmful UVA rays. By filtering out the UVB rays that are chiefly responsible for sunburn and skin cancer, sunscreens allow the person to spend more time in the sun – and this, allows that individual to soak up a higher dose of UVA than would otherwise be possible.

The findings are not a reason to stop using and recommending sunscreens however. They still help protect against damage from sunburn and two other important types of skin cancer – basal cell carcinoma and squamous cell carcinoma. Extra precautions remain important and should include:

- Reducing overall exposure to sunlight especially at midday, when rays are strongest.
- Use of creams that contain an opaque physical barrier to the sun (usually titanium dioxide) “war paint” – type sunscreens – especially over sensitive areas.

**Actinic keratoses** – Prolonged exposure to intense sunlight can bring more than sunburn, for there can be associated chronic skin damage. Actinic keratoses are also known as solar keratoses. Usually multiple although occasionally solitary, they are found in older patients as areas of solar damaged, yellow, wrinkled and thickened skin. Common sites are the forehead, ears, back of the hands, males bald scalp and female’s lower legs. They present as raised red rough patches, easier felt than seen.

Malignant change and risk of change is low and figures vary – one in 1,000 cases would be a reasonable figure. If indurated the skin may have undergone malignant change into a squamous cell carcinoma. If an actinic keratosis fails to respond to therapy, then malignancy again needs to be suspected.

**Treatment** is Fluorouracil 5 per cent cream (5-FU) applied thinly twice daily for four weeks or topical diclofenac gel applied for between 60-90 days. Cryotherapy is very effective for small areas. The keratosis needs to be frozen for between five and 10 seconds.

I.M.

Effective therapy takes place between two believers sharing the same view of the world and speaking the same language.
AIR TRAVEL AND RISK: A REVIEW

P. GIANGRANDE

Most physicians would now agree there is a link between travel for long periods and the development of a deep vein thrombosis (DVT), or blood clot, in the leg. Indeed, a meeting of medical experts and representatives of the airline industry convened by the World Health Organisation (WHO) two years ago in March 2001 agreed there “probably” was a link.¹

It must be emphasised that the risk of developing a DVT is not just associated with air travel, as there have been cases reported following long journeys by car, train and even by bus. The term ‘travellers’ thrombosis’ is therefore more appropriate than ‘economy class syndrome’ which is so often used in the press.

The fatal cases of pulmonary embolism which grab the headlines are fortunately extremely rare, but the more common consequences of a DVT are often overlooked. Quite apart from the pain and swelling of the leg associated with a DVT which can ruin a holiday or business trip, anyone who has had a DVT is at significantly increased risk of further episodes which may then require lifelong anticoagulation.

A significant proportion of patients go on to develop circulatory problems in the affected leg (‘post-phlebitic syndrome’), with persistent swelling and even ulceration. A personal history of a DVT is also likely to preclude the option of taking a contraceptive pill or hormone replacement in women.

More research is needed to establish the precise risk with confidence, but it is already clear that some basic precautions can be taken to prevent the problem. Simple measures such as periodic leg exercises and drinking plenty of clear, non-alcoholic fluids undoubtedly helps to prevent the problem.

Taking aspirin has been advocated by some, but there is no real evidence that it offers significant protection and passengers should certainly not be lulled into a false sense of security and imagine that a single aspirin will eliminate all risk of developing a DVT. Furthermore, in the LONFLIT-3 study² as many as 13% of subjects reported side-effects with aspirin in the form of gastrointestinal symptoms such as dyspepsia.

There is already plenty of evidence from surgical studies that elasticated stockings can significantly reduce the risk of venous thromboembolism. Compression hosiery, such as flight socks, works by applying graduated compression, with the maximal pressure applied at the ankle in order to massage blood back from the lower leg.

They have the advantage for travellers of offering continuous protection, even while resting or sleeping. Quite apart from reducing the risk of thrombosis, they also help to prevent the bilateral swelling around the ankles which often develops during long flights and which can make putting shoes back on difficult.

It is important to wear the correct size and they should not ruck up at the back of the knee. In the LONFLIT-4 study examining 600 long haul air passengers, more than 4% of those not wearing flight socks suffered from some form of thrombosis during a flight from London to Phoenix, and more than 3% flying
to New York. In contrast, the incidence of thrombosis among those wearing flight socks was found to be zero.  

References

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DVT News
The condition of DVT was recognised as far back as the 18th century. In 1789, coach travelers were advised by Count Leopold Berchtold to wear shoes rather than boots and to “untie garters, to alight now and then, and to walk as often as the opportunity permits, which will favour circulation and prevent the legs from becoming swelled.”

UK and Australia – Claim Confusion
Courts in the UK and Australia have issued conflicting judgements on whether survivors of deep vein thrombosis (DVT) and relatives of those now dead can sue airlines for compensation.

A court in Melbourne, Australia, allowed a sufferer to pursue his quest for compensation. A UK judge rejected a similar claim by a group of 56 families hoping to claim damages from 27 airlines, under the terms of the 1929 Warsaw Convention, which deals with compensation for passengers injured on international flights. Now almost 400 Australian victims of DVT are suing the country’s aviation watchdog, the Civil Aviation Safety Authority (CASA).

Mr Justice Nelson, in his judgment, said DVT could not be classed as an accident under the convention. The claimants were given leave to appeal and this was lodged.

Travellers Lose Appeal on DVT
Airline passengers seeking compensation for deep vein thrombosis (DVT) lost their appeal yesterday against High Court ruling blocking their claims.

The court of Appeal dismissed an attempt by 24 claimants to overturn a ruling by Mr. Justice Nelson last December: “That DVT so called “economy class syndrome” was not an accident under the Warsaw Convention 1929. To be a accident which could give rise to a claim, there had to be some “unexpected, unusual event or happening” occurring during the course of a flight, or while
embarking or disembarking.

NEW AVIATION HEALTH UNIT

The British Government has signalled its intention to focus on aviation health concerns by announcing the establishment of a new aviation health unit jointly with the Civil Aviation Authority (CAA). following recommendations by the House of Lords Select Committee.

The Gatwick-based unit, is expected to identify health concerns and identify future research needs – although it will not have its own research budget.

INAPPROPRIATE PROPHYLAXIS FOR LONG HAUL FLIGHTS

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Take a holiday to Kenya and a fit and healthy 56 years old woman who had never taken non-steroidal anti-inflammatory drugs or aspirin. Add advice from a friend to take aspirin to minimize the risk of deep vein thrombosis. Take one aspirin on the outward-bound journey and two within 36 hours of return.

Results? Well, predictably coffee ground vomiting and melena stool five days after return, with a haemoglobin concentration of 69g/1 when admitted to hospital five days later. The patient required a 5-unit blood transfusion, and endoscopy confirmed an ulcer in the duodenum. Incidentally, she was also infected with helicobacter pylori.

She made an uneventful recovery, had helicobacter eradication therapy, and was warned not to take aspirin in the future.

Tina Diggory locum consultant in gastroenterology, Hull Royal Infirmary.

THE RISK OF TAKING 75MG OF ASPIRIN

Aspirin reduces the relative risk of cardiovascular events by about 30 per cent, but the degree to which it lowers the absolute risk will be dependent on the risk to individuals. Aspirin also causes harm (usually gastrointestinal haemorrhage) in about one in seven cases. Assessing individual risk is a clinical judgment.

Nevertheless, if a patient has no particular reason to be at increased risk of gastrointestinal side effects, it is possible to calculate when the absolute benefits of aspirin are likely to outweigh the absolute risks. If the predicted cardiovascular event rate is greater than 0.8 per cent per year, aspirin will probably do more good than harm in primary prevention. If the predicted event rate is lower than 0.5 per cent per year the unwanted effects of aspirin outweigh any benefit.

Following a study published in the British Journal of Haematology, orthopaedic surgery patients have been advised not to fly long haul for three months post-op. The study showed that travelling for more than three hours resulted in a threefold increase in the risk of DVT, with hip or knee replacement patients at the highest risk, even when using anticoagulants.

Access – British heart Foundation (BHF) Factfile (December 2002) at www.bhf.org.uk
MEDICAL AID IN FLIGHT
US-registered planes will have to carry a comprehensive medical kit, including automatic defibrillators, by 2004; Regulations of the Civil Aviation Authority (CAA) have less onerous demands placed on them. Many airlines such as British Airways and Virgin Atlantic, do carry defibrillators, and about 40 airlines worldwide retain the services of Med-Aire, a US company. It has medical staff available 24 hours a day to give advice to crew members and medically qualified passengers by radio contact. They deal with 12,000 calls a year.

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**DVT News Updates** available from Department of Health website on DVT risks and guidelines at [www.doh.gov.uk/dvt](http://www.doh.gov.uk/dvt) or [scholl@myriadpr.com](mailto:scholl@myriadpr.com)

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**RISK FACTORS FOR DVT**
The risk increases with:
- Age – those over 40 years are at higher risk.
- History of previous thrombotic episode, especially pulmonary embolism.
- Malignancy.
- Pregnancy.
- Recent surgery (especially to the lower limb).
- Chronic venous disorders.
- Congestive heart failure or recent MI.
- Haematological disorders (polycythaemia and thrombocythaemia).
- Confirmed thrombophilic abnormality, such as antithrombin deficiency.
- Prolonged recent immobility.
- Obesity.
- Oestrogen therapy, such as oral contraceptive pill or HRT.
- Dehydration, such as is caused by excess alcohol consumption or diarrhoea.

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Anyone who has had orthopaedic surgery should not consider undertaking a flight of more than three hours within three months of their operation. A study of 660 people in hospital after orthopaedic surgery patients at King’s College hospital showed increased risk applied for up to 90 days after surgery.

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61
THE DISABLED TRAVELLER

Disabled people want to travel just like everyone else. In the UK the number in this group is estimated at 8.5 million to 9.4 million, with rising figures rising. Wheel-chair users account for only a small proportion of disabled people (there are about 750,00 in the UK). Transport Tripscope is the leading information service on travel and transport for people with mobility problems.

Around 10 per cent of disabled travellers want specialist facilities and disability charities to look after them while travelling, but that leaves 90 per cent who want to stay in mainstream accommodation. Disabled travellers would like to have visual information to match any audio information at transit points in railways and airports.

The Disability Discrimination Act or DDA came into force in 1996, when it became illegal for service providers to discriminate against disabled people. In 1999, providers had to make “reasonable adjustments” to policies and procedures. By next year they are expected to have made “reasonable adjustments” to their buildings to ensure access for all. Many cruise ships and hotels have now designated disabled persons room and cabins, although access may still remain a problem. A principal shortcoming of the DDA is omissions in its coverage of transport. Flying is a particularly problematic area, since it largely falls outside the remit of domestic law. To cover this, the government published a code of conduct earlier this year – Access to Air Travel for Disabled People – setting out minimum standards of service and access in terminals and on planes.

British Airport Authority is endeavouring to stop disabled people being charged for using an airport wheelchair at Stansted when they fly with Ryanair. The code of conduct also spells out that the costs of providing such assistance to disabled passengers at airports should not be passed directly on to those disabled passengers. The voluntary code only applies to British Airlines, not Irish ones. Sadly a major obstacle in transportation problems met by disabled people is often met before the vacation actually begins. Although many UK trains have specific access and accommodation for disabled passengers, multi-levelled stations still present transit difficulties due to absent or non-functioning elevator access to platforms.

Help and advice

Holiday Care Service (0845 124 9971 www.holidaycare.org.uk) Information service on all aspects of travel and holiday for disabled people. Produces packs and guides (£2.50-£5) covering: accessible accommodation and attractions in British regions; overseas destinations (including access information on transport, major sights and hotels); holidays for those with physical, mental and sensory disabilities; and sources for financial help and respite care.

Radar (020 7250 3222, www.rador.org.uk) The website has useful “question and answers” section.

Transport Tripscope (08457 585641, www.tripscope.org.uk) The best starting point for people with mobility problems. It’s primarily a telephone helpline, but its website also summarises procedures and facilities for using different forms of transport.

www.allgohere.com Summarises the policies of more than 60 airlines towards disabled passengers.

Flying High (£3 including postage, published by the disabled Living Foundation – 020 7289 6111) – Covers general issues related to flying such as using lavatories on planes.
Introduction

The increasing trend of travellers going to exotic destinations in areas such as Africa, South America and South East Asia, often for extended stays, means that more and more travellers are at risk of acquiring Malaria (and other exotic diseases). Currently in the United Kingdom the only antimalarial chemoprophylaxis available ‘over the counter’ is Chloroquine and Proguanil, alone or in combination. Other regimes are only available on prescription. The appropriate regime for the traveller is destination specific, depending on the resistance characteristics of the native Falciparum, which may change from time to time. Suggestions from the Medicines Control Agency that all antimalarial chemoprophylaxis should be available ‘over the counter’ and some evidence in the press that pharmacists were providing suboptimal advice, often based on out of date databases, stimulated this study to ascertain the standard of advice on malaria protection being offered by community pharmacists. No other similar study had been carried out on pharmacists in the UK and the only other comparable study worldwide was from Switzerland."
was taken at the 5% level throughout.

**Results**

**Demographics**

The gender split between the two regions is shown in table 1. One respondent failed to indicate a gender.

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manchester</td>
<td>23</td>
<td>13</td>
<td>36</td>
</tr>
<tr>
<td>Cheshire</td>
<td>22</td>
<td>30</td>
<td>52</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>45</td>
<td>43</td>
<td>88</td>
</tr>
</tbody>
</table>

*Table 1.*

The year of qualification ranged from 1933 to 2000. The mode was 1996 – 2000.

Most pharmacists were full time (73/89) and there were statistically more female pharmacists that were part time than male ($\chi^2 = 10.61, p=0.005$).

**Workload**

An assessment was made as to how much the provision on antimalarial advice and general travel health advice contributed to the overall workload of the pharmacists. Regarding antimalarial advice 96.6% of respondents only saw between 0 and 10 clients per week and 86.2% saw 0-10 clients per week for general travel health advice. However, 47.8% stated that they saw >40 clients per week for general pharmaceutical advice. The majority (55%) felt that the numbers seen for antimalarial advice was increasing. The numbers of sales of chloroquine and / or proguanil were small with 83.5% of respondents indicating that they made only 2 sales or less per week, though this was seasonal, and 40% felt it was increasing.

**Databases**

The huge majority of respondents (98.9%) used paper sources such as charts or books with only 7.9% using computer or on-line databases. Even the ones that used the computer or on line sources used paper sources in addition. However, even if paper sources were used these did tend to be up to date with 84% being 3 months or less old and 94.2% being 1 year or less old.

**Quality of advice**

An assessment was made on the quality of advice provided by the pharmacist both on how to take the chloroquine and proguanil and on how to minimise the risks of getting bitten.

The advice given on how long to take chloroquine and proguanil before departure and after return is summarised in Figs. 1 and 2. It confirms that the huge majority (97%) gave the correct advice but there was a small number who did not.
Personal protection measures to avoid bites are as important as the correct taking of chemoprophylaxis. Respondents were asked how often they discussed bite avoidance with the client and how often they advised DEET containing repellents, mosquito nets and knockdown sprays if appropriate. The responses are summarised in fig. 3. Bite avoidance was ‘always’ or ‘usually’ discussed with the client by 80% of respondents but the specific use of mosquito nets and repellents was only ‘always’ or ‘usually’ discussed by just over 60% and no one ‘always’ discussed the use of a knockdown spray. They were also asked about the use of protective clothing and 79% identified the evening as being the most important time to wear protective clothing with 19% suggesting it was worn all the time, many of this group commenting that this would help protect against Dengue also.
Training and confidence

When asked if they had had any specific training in Malaria, 31.5% (n=28/89) indicated that they had but in 10 cases this was actually only the standard undergraduate training (which may have been many years previously) and in 9 cases the training had taken the form of personal reading or living in a malarious area. So in fact only 9 (10.1%) had actually had any formal postgraduate training in malaria. There was, however, an obvious need for more training with 87% wanting training in malaria and 91% requesting training in Travel Medicine generally.

Despite this relative lack of training confidence levels were high with 91% being ‘very’ or ‘quite’ confident in their ability to provide advice on malaria protection. This did not vary statistically with locality ($\chi^2=1.64$, p=0.65) or gender ($\chi^2=6.20$, p=0.12) but those who had been trained were statistically more confident ($\chi^2=7.14$, p=0.007).

When asked to assess themselves as compared to other Health professionals who gave malaria advice the pharmacists rated themselves just behind Travel Health Advisers and well ahead of GPs and Practice nurses.

Scenarios

Five scenarios were presented and pharmacists asked to indicate which of seven commonly used chemoprophylactic regimes would be appropriate and where there was more than 1 appropriate regime, to grade them in order of appropriateness. Responses were assessed in line with advice given by the Advisory Committee on Malaria Prevention for UK Travellers. A response was ‘Correct’ if it coincided exactly with the guidelines including all the alternative options, ‘Almost correct’ if the first choice provided safe and effective protection but the other options were not considered, ‘Wrong’ if the first choice did not provide adequate protection, and ‘Dangerous’ if the first or second choice were contraindicated because of a medical condition in the traveller. For the sake of simplicity they were asked not to consider seasonality or cost.

The scenarios presented were:

- A woman who was 15 weeks pregnant travelling to the Dominican Republic for 4 weeks.
- Her husband to the same destination.
- A 35 year old, epileptic man travelling to the Kruger National Park in South Africa for 1 week.
- A 22 year old, diabetic woman visiting the Gambia for 3 weeks.
- A 30 year old travelling to Delhi for 2 months.

Results are summarised:
Twenty-three respondents got all five scenarios ‘correct’ and 30 got four ‘correct’. Of those, 22 got the fifth scenario ‘almost correct’.

Not every respondent attempted each scenario so overall there were 416 scenarios that were analysed. A ‘correct’ response was given in 304 (73%), ‘almost correct’ in 66 (15%), ‘wrong’ in 27 (6.5%) and ‘dangerous’ in 19 (4.5%). The ‘dangerous’ responses were advising Doxycycline in the case of the pregnant woman or advising Mefloquine or Chloroquine in the case of the epileptic man.

There was no statistically significant difference in performance as related to training ($\chi^2=0.27$, $p=0.96$), confidence ($\chi^2=1.03$, $p=0.79$) or date of qualification ($\chi^2=1.58$, $p=0.66$) but the pharmacists from Cheshire performed significantly better that those from Manchester ($\chi^2=12.62$, $p=0.005$).

**Discussion**

Overall the advice provided by the pharmacists on personal protection measures and how to take the medication was quite good, but there was a small but worrying number who gave incorrect advice on how to take Chloroquine and Proguanil. The number regularly advising mosquito nets if necessary was also lower than would have been hoped. As far as the scenarios were concerned there was a wide variation in the standard with 23 getting all five scenarios completely right but 14 getting only 1 or 2 right. What was worrying was that there were 19 responses that advised contraindicated medication. Alternative options were not always considered even though the first choice option may have provided safe and effective prophylaxis. Despite this the pharmacists rated their ability highly and significantly better than GPs and practice nurses though they were very keen on having further training.

I would like to thank the pharmacists that returned the questionnaires for their courage and openness. Perhaps a similar study could be carried out with GPs, practice nurses – and travel health advisers as subjects!
A STUDY OF THE PROCESS AND PRACTICE OF RISK ASSESSMENT, IN THE CONTEXT OF TRAVEL HEALTH PROMOTION WITHIN GENERAL PRACTICE

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Summary
Affordable air transportation and the boom in tourism and business opportunities in developing countries has brought increased risk of exposure to travel related hazards such as disease and physical danger. For some, foreign travel can be a risky business.

Travellers may choose to seek advice regarding hazards to health and risk reduction from private travel health clinics, or increasingly from primary care practitioners. The responsibility of communicating information about travel related hazards and the risk of such hazards causing harm has largely been delegated by General Practitioners (GPs) to the practice nurse.

This study investigated whether practice nurses incorporate the concept of risk assessment (in the context of the promotion of travel health) into their current practice, and factors that influence that practice.

Methodology
Out of the 210 nurses working within general practice surgeries in South Cheshire, 181 were identified as being currently responsible for providing pre-travel advice to the practice population and met criteria for inclusion (N=181). 181 questionnaires were sent, 110 were returned (61% response rate).

Following a pilot study, a descriptive, cross-sectional design investigation incorporating some analytical components was used to explore current practice. Data collection was by self-completed anonymous questionnaire. Questions provided demographic details and profile of current practice. Four clinical vignettes were designed to test nurse knowledge and ability to determine travel related risk. Level of confidence was measured subjectively using a confidence scale.

Statistical analysis utilised The Statistical Package for Social Sciences (SPSS) version 11. Some results only required descriptive statistics, however exploration of relationships between variables was undertaken by using cross-tabulations (2x2 tables) and application of $\chi^2$ test with Yates’ continuity correction.

Results – Demographic data
64% participants had 6-10 years experience of giving travel health advice. Only 5 had never had any structured travel health education and (68%) had undertaken an update in travel health in the preceding year. Most had received some training in travel health risk assessment (71%), but (23%) had received no training on this topic with 6% unsure in their response.

(33%) nurses were members of the Royal College of Nursing Travel Health Forum, (4%) members of the BTHA, none belonged to ISTM, and (63%) nurses were not currently members of any travel medicine group.

Profile of current practice
Systematic risk assessment was carried out with every traveller consulting
for pre-travel advice by (58%). (39%) nurses said they did not and (3%) said they were unsure whether they did or did not. Risk assessment tools were used by 57% of the participants (Fig 1).

Those carrying out a risk assessment for every traveller were more likely to have longer duration of experience giving travel health advice, (difference not statistically significant. No statistical association between access to information resources and training and carrying out a risk assessment were found. (59%) allowed 11 to 30 minutes for each travel health consultation. Forty-four (41%) nurses allowed 6-10 minutes for a travel health consultation. Those carrying out a risk assessment with every traveller were more likely to set aside more time for consultation (p=<0.04) and to consider the time allocated as inadequate (p=<0.001).

Nurses were confident assessing risks for most types of traveller (Fig.2) and advising about most travel related hazards (Fig. 3). Participants were least confident about giving advice regarding animal borne disease (51/107). Most commonly used information resources were the ‘Green Book’ (96%), and telephone advice line (81%).

Few scored well in the scenarios, with only (8%) getting all four answers correct. Less than half gave correct answers to two questions (this being the most frequent end score.

Discussion
Factors influencing risk assessment (knowledge, resources, experience, confidence)

The literature supports the notion that a sound knowledge base is an essential requirement when undertaking a pre-travel risk assessment. Evidence of development of a sound knowledge base in travel health through regular educational update was found to be variable. The percentage of nurses who had not received any structured travel health education was low. Nevertheless, these nurses considered themselves responsible for delivering travel health advice, in their current role. A minority of nurses in this study appear to be ignoring professional advice to only assume a role for which they are adequately trained and competent.

A large percentage of the participants had undertaken training relating to risk assessment and very few had not. It might have been expected that nurses who had undertaken appropriate training would be more likely to carry out a risk assessment on every patient than nurses who had received no training in this skill. However this study found no significant difference between these two categories, although this could be attributed to the small size of the sample or to confounding factors, such as time allowed for consultation.

Most nurses surveyed were found to be confident in assessing risk and advising the traveller about destination hazards. Any subjectivity relating to the concept of confidence was reduced by providing definitions of levels of confidence. The limitations of determining confidence in the manner described are acknowledged and results interpreted with caution.

Despite the suggestion from the findings that nurses were confident assessing and advising in most areas, there appeared to be heavy reliance on
live information resources. This might infer that nurses lack confidence in their own ability to correctly determine risks and give appropriate advice.

Length of time allocated to a travel health consultation did appear to influence whether or not a risk assessment was carried out or not and most participants considered the time allowed to be inadequate. Time as a resource may not be negotiable in general practice. This consideration may be supported by the finding that a sizable proportion of nurses said they were able to carry out a risk assessment on every traveller despite allocating only 6-10 minutes for the travel health consultation. It seems unlikely that a valid risk assessment could be carried out in during such a short time. However the term ‘risk assessment’ may be open to subjective interpretation.

The study confirmed that nurses who have had many years experience delivering travel health advice have a higher level of knowledge relating to the subject, and as such might be more likely to carry out a risk assessment on travellers.

Though end scores for the scenarios were disappointing, responses to scenarios might not be a fair way with which to assess a nurses’ knowledge or ability to make a risk judgment. Limitations inherent in the use of vignette methodology have been described by other researchers78 who suggest that responses might be flawed because of omission of detail relating to the patient. Great effort had been made to replicate real life scenarios, it was not possible to include all the details that ordinarily required for satisfactory risk assessment. Alternative methods such as interviews or observation have their own limitations, and would have been difficult to undertake given the size of the sample and time limitations.

Conclusion

Results can only be related to the Health Authority population studied. They do provide an interesting snap-shot of current practice relating to the process of risk assessment in the general practice setting, an area poorly researched.

Practice nurses appear to acknowledge the importance of risk assessment, but the practice may be limited by constraints of time and an inadequate knowledge base. More education will be required in order that a cohesive approach to risk assessment may be developed.
Type of risk assessment tools currently used

Figure 1.

Level of confidence when assessing and advising the traveller according to type of traveller

Figure 2.
The bar graph provides an overview of the levels of confidence expressed relating to assessing and advising according to the type of traveller.

**Level of confidence when assessing and advising the traveller according to type of hazard**

![Bar graph showing levels of confidence](image)

Figure 3.

**Type of travel related hazard**

n=107 (there was one missing answer in each category).

The bar graph provides an overview of confidence levels expressed relating to assessing and advising on destination hazards.

**References**

3. Gehebrenewet S. Submission for 2nd part of membership of the faculty of Public Health Medicine, October 1999, unpublished.

*H. Simons is Primary Care Immunisation Facilitator South Cheshire Health Authority.*

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Heathrow is the world’s busiest airport with 64 million passengers every year.
ATTITUDES, BEHAVIOURAL RESPONSES AND COPING STRATEGIES OF ADOLESCENTS TO ADVERSE AIR TRAVEL RELATED EVENTS

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* Strathallan School, Perthshire ** Psychology Dept., University of Stirling

Abstract
An opportunistic questionnaire study of adolescents attending a Scottish coeducational boarding school in Central Scotland. Investigation of their reactions to:
1. The air attacks of Sept 11, 2001 in USA, and attitudes to: 2. The possible association of deep vein thrombosis (Dvt) with prolonged air travel, a year after mass media publicity of these anxiety provoking events. Attitudes, behavioural responses and coping strategies to these adverse air travel related occurrences were ascertained and submitted to comparative analysis of the data. The majority of the cohort had undertaken recent air travel. 27% were worried about this travel mode with 33% moderately or very worried. Sept 11 events appeared to have had little durable effect upon the adolescents. They were knowledgeable about the possible link with air travel and Dvt, with about half believing it a health risk. A third were worried about this possibility and 70-80% blamed the cause on lack of in-flight leg space and immobility.

Introduction
The air attack on the Twin Towers in New York on Sept 11, 2001 had an immediate effect on air travel, with a huge fall in air travellers world wide in the weeks immediately after the tragedy. In the 24 weeks after the attack European Airlines lost 25% of their North Atlantic and 10% of short haul traffic.1 In the succeeding year there was much mass media attention to air terrorism and the possible link between prolonged air travel and development of deep vein thrombosis. One year later, transatlantic air traffic was still down by 10% but European use was back to previous figures.

These adverse travel related events had an effect on the public's willingness to undertake air travel which apparently decreased with time. A key factor in peoples judgement is that responses are made on the basis of “perceived” and not the “true” risk associated with an activity. Air travel remains a relatively safe mode of transport compared to car travel but specific anxieties about air travel are common.2,5% of medical emergencies recorded by one international airline, were related to anxiety.3 Between 10 and 40% of air travellers experience some kind of fear response to the air travel process.4 Flight related anxiety is shared by women and men, but is more predominant in females, which is consistent with the pattern of anxiety disorder in the general population.

Anxieties related to air travel have been researched in adults but data on younger people is very limited. Fears and phobias are more common in children and air phobia affects more children than adults.4 The adverse events of Sept 11 and adverse publicity about Dvt. may therefore have had more impact on teenagers. The threat of air terrorism and the possibility of venous thrombosis threaten international travellers with psychological and physical trauma.

Many boarding schools have a large pupil intake from overseas and pre-term and end of term air transportation is common. The willingness of pupils to undertake such travel and do so without anxiety, is a concern to parents.
and school staff. Both have a role in care and support with the air carrier at this transportation interface, but this can be a grey area of overlapping responsibility when the child is en route. A recent fire at Heathrow airport dislocated travel arrangements for children on the way home at the end of term. Delays, reroutings and communication difficulties badly disrupted the home-ward journey with distress to parents, teachers and pupils.

National Care Standards dictate boarding school responsibility for pupils while they are away from home and schools have a duty of care in travel arrangements. Airlines have a regulatory duty of care to passengers and parents have a moral responsibility for their children while they are in transit. This commitment can only be met if the physical and psychological effects of air transportation have been identified and assessed. The literature is sparse on the latter and there may be a need for travel health and education professionals to assess the psychological risk and need for pre-travel counselling with children travelling to and from far distant homes.

This research therefore studied the effects of two recent occurrences, the Sept 11 terrorist attacks and the public recognition that long air travel may be associated with development of Dvt, on adolescents exposed to air travel, a year after they were first widely publicised. There has been little research on travel related health issues in children. The school was interested in evaluating the provision made for pupils and regarded this as a way of investigating the needs of a group which included many international travellers.

The study was designed to provide data relating to air travel in those aged from 13-18 years. Awareness, reactions, behavioural responses and coping adaptations were recorded and the degree of associated worry measured.

Objective
To study the effects of the terrorist events of Sept. 11, 2001 and recent recognition that prolonged air travel may be associated with increased risk of Dvt development, on adolescents attitudes, behavioural responses and coping strategies to personal air travel. Methodology An opportunistic questionnaire survey of pupils aged 13-18 years inclusive, attending a Perthshire coed boarding school on a selected day, one year after the events in USA on Sept 11, 2001. There was comparative analysis of the data for gender and age.

Instrument A 13 point structured, branched questionnaire recording de-mography, awareness of the events, frequency of travel, travel related worry, behavioural responses, and coping strategies. Linear scales were used for assessment of the degree of worry admitted by participants, regarding recent adverse travel related events.

Results
N = 400  167 females: 233 males. Participants=251
Compliance rate = 62%
For age analysis the cohort was divided in to 3 groups aged 13-14, 15-16, 17-18 years age.
Air travel experience
85% had travelled by air in the previous year.

75
95% in previous 5 years.
5% had never undertaken air travel.
There were no significant differences between the age and gender groups.

**Effect of the Sept 11 events**
4% children intended to fly less (boys-3%, girls-5%) and 3% of girls did not want to fly again.
86.5% stated they intended to fly the same as before.
The remainder did not know, or expected to increase their flights in future.

**Worry about air travel**
Asked if the thought of flying worried them 22.7% answered “yes” and 77.3%, “no”. Significantly more girls were worried but there were no age group differences. In those who were worried 27.5% were moderately or very worried with girls admitting a significantly greater degree of worry than boys (p<0.047). There was no difference between age groups.

**Stress coping strategies**
62% of boys and 80% of the girls did nothing to try to reduce their flight-related worry.
Only one boy was worried enough to avoid flying.
7% of boys and 10% girls would use some form of relaxation technique for stress reduction.

**Children’s concerns about flying**
Concern related to:
- 24% – being air-borne
- 11% – hijack
- 9.5% – delays
- 20% – mid-air explosion
- 32% – air accident

Girls had more concern about being airborne but there were no other significant gender or age differences.

**Knowledge about Dvt**
Awareness increased with age (p<0.001).
80% of the children believed there was a link between long air travel and Dvt. All the girls believed this but only 70% of the boys.
45% of the pupils believed that Dvt was a health risk related to long air travel, 40% thought there was perhaps a link, 10% did not know and 5% did not perceive it a risk.

**Worry about Dvt**
35% of children were worried about the development of dvt.
42% of the worried were moderately so and 16.5% very worried, with no gender or age differences.

**Cause of Dvt**
Children believing cause was due to:
- Cabin air supply – 11.2%
- Lack of leg space – 80%
- Immobility – 72%
- Bad seat design – 32% with no gender or age differences in response.
Precautions against development of Dvt

33% boys and 18% would take no precautions
6% would consider taking a pre-flight aspirin
7.5% would try to avoid flying for this reason
45% would exercise legs in flight.
No age and sex differences.

Discussion

The majority of scholars had travelled in the previous 5 years and most in the previous year. This exposure to air travel is similar to that of adults under 65 years. Only 4.5% had never flown. Willingness to fly seemed little affected by the terrorist events and recent public recognition of possible dvt risk with air travel. Only 5% stated they intended to fly less or avoid flying compared with a study on adults where 8% made this statement.8

27% of the scholars admitted to worries about flying with 33% of the worriers, moderately or severely worried. With no difference between ages but a significant gender difference. Girls were significantly more worried than boys (17% girls to 33% boys). This gender difference has also been found in older women. Some of these worries may be phobic in nature as fears and phobias about flying are common in the young and more common in females.

Relatively few pupils make behavioural responses to worries about fear of flying with 7% of boys and 10% of the girls using some relaxation technique to diminish their anxiety. Avoidance of air travel was rare. Air accident, and mid-flight explosion were the most quoted concerns, but being air-borne was a worry for 24% of the cohort with girls more concerned than boys.

Knowledge of a possible link between long air travel and development of dvt was stated by the majority (80.5%) with a significant difference in awareness between younger and older age groups (p. 0.001) and between girls and boys. All the girls believed there was a link and only 70% of the boys. A third of the pupils were worried about this possible link and of those who were worried 58.5% were moderately or very worried. The majority believed Dvt a health risk associated with air travel (85%) and most blamed lack of leg space and immobility. The results may not be representative of the general population of young people, but they reflect findings from studies in adults.

Parents and educators should be aware of the anxieties and concerns experienced by many global travelling scholars. Pre-travel counselling of this cohort should be considered. Education on the facts and the risk and appropriate precautions may reduce the potential adverse psychological and physiological effects of international air travel. Schools could initiate an information programme for pupils who are flying, particularly for the first time, which could help to inform them of the process of flying from check in to landing at their destination. This might involve an interdisciplinary approach with input from school medical officers, practice nurses, housemasters and teachers on the School’s PHSE programme and peer support from pupils who consider themselves competent and confident flyers.

Summary

The events of Sept 11, 2001 appear to have had little lasting effect on the
teenagers studied. About 1 in 4 are worried about air related mishap and 1 in 3 about Dvt development and a considerable number are moderately, or very worried in this regard, with girls particularly affected. There would appear to be a case for pre-travel education and counselling for pupils and girls especially, undertaking prolonged air travel.

Acknowledgement
A small grant was received from BTHA. Grateful thanks for help with data analysis to Alister Roy and J. Gauld.

Footnotes

Why settle for the experience of a lifetime if you can have a lifetime of experiences.
A SURVEY OF LONG HAUL TRAVELLERS AND PRACTICE NURSE ATTITUDES TO HEALTH CARE

A survey was carried out in April 2003 on 200 travellers who had travelled to long-haul destinations (excluding North America and Australia / New Zealand) in the past two years, or were planning to do so in the next 12 months, and 100 practice nurses. Participants fell into two groups: 16-25 year olds and individuals 50 years or over, with between group comparison. Practice nurses were asked what they thought each group of consumers’ responses would be, and how they felt each group ‘should’ have responded.

Their opinions were asked about the most important health precautions that they believed people should take when travelling to a long-haul holiday destination.

Results

Most popular destinations were Central/South America, closely followed by the Middle East and Central Asia. The war in Iraq affected the holiday plans of over one in four people. One in five respondents said that the threats associated with the conflict had led them to postpone, cancel, or delay making a decision about their plans to travel.

Less than one in 10 believed that a low risk of contracting a disease was the most important consideration when selecting a long-haul destination. Travellers admitted to few health care concerns, with less than one in 20 concerned about whether quality healthcare was available when they chose their destination. Top priority when selecting holiday destination was, whether there would be accommodation appropriate to needs. (See Table 1.)

Practice nurses believed that travellers should consider issues such as vaccination and properly prepared food, 81% of nurses believed that people in the 16-25 year olds age group would rate safe sex precautions in their top three priorities. However, when 16-25 year olds were asked what they considered to be the most important health precaution to take when travelling abroad, they selected vaccination against disease. Practice nurses had a better understanding of what 50-year-olds and over would prioritise. See table two for the comparisons of the different groups surveyed.

Reference

Long-haul travelling: Research amongst practice nurses and travellers – A report; Plus Four Market Research Limited, commissioned by Aventis Pasteur MSD.
Table 1: A summary of the considerations when selecting the destination of travel

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Considered as top priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>The availability of good accommodation</td>
<td>35%</td>
</tr>
<tr>
<td>No threat of war</td>
<td>21%</td>
</tr>
<tr>
<td>Low crime rates</td>
<td>8%</td>
</tr>
<tr>
<td>Cheap travel</td>
<td>12%</td>
</tr>
<tr>
<td>Quality healthcare available</td>
<td>4%</td>
</tr>
<tr>
<td>Lots to see and do</td>
<td>13%</td>
</tr>
<tr>
<td>Low risk of contracting disease</td>
<td>7%</td>
</tr>
</tbody>
</table>

Table 2: Percentage of responders who consider an activity as a top priority

<table>
<thead>
<tr>
<th>Travel health priorities</th>
<th>Considered as top priority (16-25 years)</th>
<th>Nurses as top priority (16-25 years)</th>
<th>Nurse recommendations as top priority (16-25 year olds)</th>
<th>Considered as top priority (over 50 years)</th>
<th>Nurses as top priority (over 50 years old)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccination</td>
<td>35%</td>
<td>27%</td>
<td>38%</td>
<td>34%</td>
<td>53%</td>
</tr>
<tr>
<td>Food</td>
<td>23%</td>
<td>7%</td>
<td>2%</td>
<td>27%</td>
<td>17%</td>
</tr>
<tr>
<td>Bottled water</td>
<td>14%</td>
<td>18%</td>
<td>3%</td>
<td>18%</td>
<td>13%</td>
</tr>
<tr>
<td>Sun protection</td>
<td>18%</td>
<td>15%</td>
<td>8%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Drugs</td>
<td>5%</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Extreme activities</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Safe sex</td>
<td>1%</td>
<td>27%</td>
<td>46%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Road safety</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

The survey was carried out by Plus Four Market Research Limited and was funded by Aventis Pasteur MSD Pharmaceuticals.

SURVEY OF PRACTICE NURSES AND PHARMACISTS

Travellers are advised to consult their GP at least four to six weeks before departure to ensure they receive health advice and maximum protection from vaccinations. Practice nurses in the North, Midlands and South of England were interviewed. Community pharmacists from across the UK. Almost one in five practice nurses report that travelers seek health advice less than two weeks before they go abroad. A further third responded that travelers consult the clinic two to four weeks before traveling and almost one in five (18%) said that, on average, travelers wait until just two weeks before they leave the UK. The vast majority of pharmacists believe they have a role to play in travel health (99%). More than half of the pharmacists surveyed (55%) carry out risk assessment for travelers.

The survey was carried out in association with BTHA.
A NATURAL SANDFLY REPPELLENT DEVELOPED FROM “HUITO”
(RUBIACEAE)

Perez J. Maldonad, H. Reyes, U. Ogusuuku, E. Bauer

Sandflies of the genera Lutzomyia are worldwide vectors of Leishmaniasis, Bartonellosis and other protozoal, bacterial and viral illnesses. Transmission occurs when infected sandflies feed on humans. In areas of high sandfly infestation and a person can in the peak season receive up to 300 bites in a single night and over 1000 in tropical rain forest. Normal control measures do not protect humans engaged in outdoor activities at the time of highest sandfly activity in early evening, the crucial time for passage of pathogens.

This research studied the use of the unripe fruit of Genipa Americana “Huito” trees which has traditionally been used by Peruvian Indians to protect their skin from sandfly attack.

The results found the aqueous extract of unripe fruits of Huito to have a very high (80-85%) repellent effect against sandflies. It contains an antifeeding compound which does not allow the insects to feed on treated skin. It appears to have no side effects and can be used extensively on skin—a cheap and effective alternative to proprietary preparations.

FEWER INCIDENTS OF AIR RAGE

Air rage incidents have fallen in the past year on British and American flights. British airlines recorded 15 per cent fewer outbreaks of disruptive passenger behaviour in the year to March 2002 compared with previous year. Some may be accounted for by the decrease in passenger numbers after September 11 2001, but decrease in reported incidents was much greater than the fall in passenger numbers.

In the 12 months 1,055 cases (52 were classed as serious) were reported on British airlines, compared with 1,250 (63 serious) the previous year. (Dept of Transport.)

In the United States, the Federal Aviation Administration said there had been 83 recorded cases in the year to June 26, compared with more than 300 annually for the previous three years.

Bangor international airport in Maine, where air rage incidents have prompted between three and five emergency landings a year over the past few years, have only had one case since September 11. The chance of being on a flight when an air rage incident takes place has fallen from one in 17,000 last year to one in 22,000 this year.
CASE HISTORIES

THE RETURNED TRAVELLER

History – Complaint of bouts of slight diarrhoea while away. Had no past medical history. Had swam recently in Lake Malawi, swimming every day. Did not remember any “swimmer’s itch or felt any malaise or lethargy on vacation, but was now unwell with wheeze and shortness of breath.

On investigation – Had an eosinophilia.

Diagnosis – Assumed to have a parasitic infection. Schistosomiasis. The eosinophilia tends to coincide with the parasites migration through the body. In many patients with established parasitic infections, the eosinophilia subsides.

Schistosomiasis commonly acquired in sub-Saharan Africa and a common cause of eosinophilia.

Investigations – A full blood count to ensure the total eosinophil count is elevated above 0.4 x 10⁹/1 – the definition of an eosinophilia. Stool microscopy for ova, cysts and parasites. Terminal urine -the last few drops passed at the end of micturition. ELISA tests exit for schistosomiasis, filariasis, strongyloidiasis and other rarer parasitic infections, but none is 100 per cent sensitive nor specific.

Treatment – Praziquantel is given as 20mg/kg, two doses six hours apart on a single day, for schistosomiasis.

I.M.

FEVER IN RETURNED TRAVELLER

History – Patient had been on holiday in Kenya with two weeks on the coast and two weeks on safari. He took weekly chloroquine and daily proguanil as antimalarial prophylaxis. After return to UK he developed a fever associated with headache and generalised myalgia. Symptoms persisted and he became sufficiently worried to go to the GP.

Diagnosis – Any patient who comes back from Africa and develops a febrile illness should be assumed to have falciparum malaria which is potentially fatal. Other diagnoses need to be considered:

• Urinary tract infection, sinusitis, skin sepsis, chest infections need to be considered.
• Non-specific viral illnesses are very common among travellers.
• Tick typhus is common in East Africa.
• Typhoid.

Investigations required – Anyone suspected of having malaria with no evidence of an alternative cause of fever should be referred urgently to hospital. A thick and thin film for malaria parasites needs to be done urgently, and, if negative, repeated every six to 12 hours for up to two days (the films
should be made and examined the same day).

Other investigations –
- A full blood count
- Cultures of blood, urine and throat swab often provide useful information.
- U&Es and LFTs

Treatment – Quinine remains the drug of choice with the standard dose of 10mg.kg body weight given three times a day.

Preventive advice – Chloroquine and proguanil no longer offer adequate protection.
Recommended alternatives are mefloquine once weekly, doxycycline daily or Malarone daily.

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RETURNED TRAVELLER WITH ABDOMINAL PAINS

History
After an extensive tour of Africa, travelling fairly rough, a traveller reported to a travel health clinic. Since his return three weeks previously he has been generally unwell and complaining of some intermittent mild abdominal pain of a nonspecific pattern.
Examination was unremarkable but blood tests were taken.

Investigation
A stool sample sent for ova, cysts and parasites did not yield a parasite (only likely in a minority of cases). An eosinophilia was suggestive of helminth infection. Blood films for malaria were also taken but were negative. He was given antihelminthic medication and the symptoms settled.

I.M.

____________

SUN, SEA AND SORROW

I was doing a locum as a surgeon in Ecuador, South America. The hospital was some miles from Guayaquil, few degrees south of the equator and at the seaside. It was Christmas Day and I was off duty that morning. The day was warm and overcast – ideal for a swim and to laze on the beach with a good book.

I enjoyed swimming in the warm waters of the Pacific Ocean, then made myself comfortable on a rug to dry off in the warm air and to get down to a read. I nodded off and may have slept for perhaps an hour. When awakening, my skin was sore and I had developed severe sun-burn. The sky had been overcast all the time but not sufficiently to stop the damaging effect of the UV rays.

The exposed skin turned bright red, blistered and peeled over the next three weeks. Calamine lotion in massive quantities and paracetemol, as needed,
helped but little.

It was not possible for me to ask for a Sickness Certificate(!) and I had to continue to work at the hospital, despite my agony. Fortunately my hands were not sunburnt because “scrubbing” before operations was essential. Underwear continued to gather masses of scabs from the dried blisters for days thereafter and had to be changed repeatedly.

I learnt my lesson: Don’t trust the sun in the tropics, even if hidden behind the clouds! Above all do not forget sun-barrier.

G.S.P.

I was doing a GP locum session at an unfamiliar practice and an ancient woman in a sari struggled into the room with her interpreter. My patient spoke not a word of English and she didn't have any teeth. Her mother tongue was Gujarati which I quickly began to realise had a lot of vocabulary in common with Nepali – which I do speak. Because of my patient’s toothlessness I could only understand the interpreter’s Gujarati and not my patient’s.

This woman was diabetic, she had uncontrolled hypertension, rheumatoid arthritis and anaemia unresponsive to the iron tablets because the tablets made her constipated and she’s stopped taking them. But I plunged in to sort all this out with great confidence because I thought I knew a little about health promotion in South Asians.

‘Perhaps,’ I ventured, ‘You could take some orange juice with the iron tablets? That will help the iron get into your blood and help your bowels too.’

‘Don’t be ridiculous,’ she said via her interpreter. ‘Don’t you English doctors know that acidic fruit juices make rheumatism worse?’

J. W.-H.

A 28-year-old woman came to see me in a routine surgery in Cambridge saying, ‘I’m off to India in a few weeks and I’d really like to get my Irritable Bowel Syndrome sorted out before I go. It is still giving me quite a bit of trouble and the diet changes and the mebeverine that the other doctor prescribed don’t seem to have helped at all.’

I asked whether she’d been to India before.

‘Yes last year.’

‘And when did the stomach troubles start?’

‘While I was out there and they never really got better afterwards.’

The first of her three stool samples revealed giardia, her IBS was cured with metronidazole and I had a very grateful patient … all fit and well and ready to catch giardia again.

This reminded me of the value of taking a travel history – especially in patients with long-lasting gastro-intestinal symptoms.

J. W.-H.
QUESTIONS AND ANSWERS

TESTS FOR TUBERCULOSIS

Q Will new blood test replace skin testing for tuberculosis?
A Heaf test, percutaneous injection of tuberculin, or the Mantoux test, intradermal injection of tuberculin are in current use. BCG vaccination gives a weak response to these tests.

New tests, e.g. Elispot assay, detect the release of cytokines from T-cells activated to tuberculin. These have greater sensitivity and specificity, reducing false-positive and false-negative effects, and can separate BCG effect from true tuberculin. More expensive they may supersede skin testing if cost is offset by savings in reduced interventions.

SMALLPOX VACCINATION?

Q Are adults who were immunised likely to still be immune?
A In 1980 the WHO declared the disease eradicated. Variola virus has since existed only in laboratories. Successful primary vaccination confers full immunity to smallpox in more than 95 per cent of patients for about five to 10 years. Successful revaccination probably provides protection for 10 to 20 years or more. Vaccinations are needed every three to five years.

DIAGNOSIS OF MALARIA

Q Does a patient who has had malaria and recently has had some night sweats (but negative films and is otherwise well) merit blood testing?
A Blood tests, taken during pyrexial episodes or rigors, would make current infection with malaria unlikely. Biological false positives due to low-level cross-reacting antibodies and lack of antibodies in very early infections, mean serology should not be used to diagnose malaria. It is useful for retrospective diagnosis and epidemiological purposes. In malaria usually titres high.

TOXOCARA INFECTION

Q At how much risk of Toxocara are children playing in public sandpits or beaches fouled by dogs?
A The fresher the dog faeces the less risk of infection. Toxocara eggs take several weeks to mature to the infectious stage. Soil or sand constantly exposed to dogs, especially puppies, is greater risk. Precautions – discourage young children from eating soil and putting fingers in mouths.

HELMINTHIC INFECTIONS

Q Do world travellers often return with helminthic intestinal infection?
A 3 per cent of travellers returning to the UK from tropics, who were screened in a clinic study had gut helminthes.

SCUBA DIVING

Q Can hypertensive patient with asthma scuba dive when abroad?
A There is a high risk of problems when diving. Hypertension increases the risk of pulmonary oedema and this may be confused on surfacing with pneumothorax due to barotraumas. Some antihypertensive drugs are dangerous, e.g. B-blockers which may limit normal heart rate and exercise response as well as predisposing to bronchospasm and air trapping. Vasodilators can cause dizziness after diving. Asthmatic symptoms may be provoked by exercise, cold air could be hazardous under water leading to pneumothorax.

Medical examination for fitness should include a test to exclude exercise-induced bronchospasm.

Diving is hazardous for those with epilepsy, pneumothorax, psychiatric illness including depression, cardiac arrhythmias and bleeding disorders and for those on oral anticoagulation. Although patients with well-controlled diabetes are allowed to dive in the UK. Risks include hypoglycaemia because of treatment or problems arising from end-organ damage such as coronary artery disease or autonomic dysfunction.

Q What restrictions are there on flying after diving?
A Pressurised aircraft are not fully pressurised and post dive passengers will have some desaturation in flight. Injured divers who need to be flown to a hospital must be flown at less than 1,000 metres altitude.

Divers must not fly after diving for a period of time (obtained from dive tables used by divers to calculate safe diving time and depth limits).

Q What may be the diagnosis when a sub-aqua diver is found unconscious on a beach?
A Hypothermia, Pneumothorax, Decompression illness.

Pneumothorax can be a direct result of uncontrolled ascent. Breath holding can literally burst the lung as gas expands on ascent.

History of a spontaneous pneumothorax is an absolute contraindication to diving due to high recurrence rates and also the risk of pneumothorax while diving.

Decompression illness – The “bends” caused by the presence of gas bubbles in the body’s tissues. If a diver ascends without required decompression stops to allow excess nitrogen to be “blown off”, bubbles will form in the body tissues producing a wide spectrum of symptoms known as decompression illness (DCI).

The commonest presentation of DCI is pain (40 per cent) followed by numbness, headache, fatigue and collapse. Patients with DCI will have impaired gas exchange. Oxygen can decrease damage to ischaemic tissues. Treatment involves – Recompression in a chamber, 100 per cent oxygen, the most effective way of reducing the size or removing the offending bubbles from the patients’ body tissues.

IV fluid administration Divers are often dehydrated and this improves outcome. (See ‘Rapture of the Deep’ this volume, pp. 17-24.)

RETURNING TRAVELLER

Q A returning traveller has a low-grade fever and a non-specific rash after
visiting a South African game park what is the likely diagnosis?
A He has South African tick typhus, a mild disease whose resolution can be speeded with tetracycline. Rash is macular and could be caused by viral infections, site of introduction of the causative organism caused by the tick bite which is often in a skin flexure.

Q How does Cutaneous Leishmaniasis present?
A Cutaneous leishmaniasis skin sores develop, particularly on exposed areas, which do not heal with antibacterial measures. Edges are often raised and rolled. Distribution – Mediterranean coast, Middle East, Indian subcontinent, Southern countries of the former Soviet Union, China and Africa. Organism is leishmania, injected by the bite of female sandflies. Treatment is with antimony compounds.

Q How is Cutaneous Larva Migrans recognised?
A Itchy areas of skin, usually of the feet, associated with twisting linear urticarial swellings. Sleep is interrupted by intensity of itching. Transmission – An infected dog stool lies on the ground or beach and is stood upon by a bare foot. The larva penetrates the skin and wanders in the skin until dying. People should be advised never to go barefoot where dogs have been roaming. Treatment is with albendazole, or thiabendazole (the latter may cause gastrointestinal side-effects) and symptomatic relief to relieve the itching.

Q A woman aged 28 has been planning a trekking holiday in Nepal with her husband in two months time but has just discovered that she is about eight weeks pregnant. She is not keen to cancel her holiday and asks your advice about the advisability of going ahead with it. Her itinerary would take her to a maximum altitude of about 14000ft (4300m). She is in good health with no medical problems.
A Intrauterine growth retardation has been observed in high altitude residents, but the effect is most marked later in pregnancy, within the last eight weeks. It is unlikely that a relatively short holiday in the middle trimester of pregnancy would have a significant effect on foetal growth. Growth retardation in late pregnancy may be associated with hypoxia during the earliest weeks of pregnancy while the placenta is being formed, but again this woman’s travel would be outside that period of time.

A normal foetus is able to tolerate moderate degrees of maternal hypoxia quite well in the absence of placental insufficiency and there is no evidence of adverse outcomes from exposure of pregnant women to altitudes of up to 8,000ft (2500m). In the presence of placental insufficiency hypoxia is likely to result in reduced foetal oxygenation, and a potential danger of travel to high altitude is that a degree of placental insufficiency which has not been detected prior to travel may become more significant when the mother becomes hypoxic at altitude, resulting in foetal hypoxia. It will be necessary to avoid altitude illness, particularly high altitude pulmonary oedema (HAPE), as the degree of hypoxia this would cause could impair foetal oxygenation. She must pay attention to the rules of safe ascent, with rest days, avoiding over-exertion and
dehydration, and descent in case of any symptoms suggesting HAPE. It would not be wise to take acetazolamide during pregnancy. If she is fit and healthy and used to taking exercise she is unlikely to experience a great decrease in her exercise tolerance at the stage of pregnancy at which she is travelling, but she would be well advised to stay well within her exercise tolerance.

The lack of medical and obstetric facilities in the trekking areas of Nepal could be a problem, but this woman would be travelling at a stage when both the early complications such as hyperemesis and miscarriage, and the late complications such as antepartum haemorrhage and premature labour are less likely to be a problem. She could become ill from other causes, and a severe pyrexial illness may well damage the pregnancy. Dehydration due to fluid loss from severe diarrhoea, or blood loss from trauma could have an adverse effect on placental blood flow, and the lack of rapid access to medical care may add to the problems, though a brief episode of travellers’ diarrhoea, very common in Nepal, is not likely to cause too many problems if she is able to maintain oral rehydration. Availability and quality of blood for transfusion could well be an issue.

All these factors should be discussed with her and she should also discuss her plans with her obstetrician. Eventually the decision will be for the woman herself to make. There is little evidence that the short period at high altitude she is planning will in itself have an adverse effect on her pregnancy at the time she intends to travel, provided that she is able to avoid altitude illness and any other severe illness. If she is not prepared to live with the risks involved she may wish to cancel her trip, but if she does go she is likely to enjoy a memorable experience.

M.T.

Writing a travel guide ideally requires the research skills of a detective, the fluency of a novelist and the advertising copywriter’s ability to make every word count. – Maris Ross.
FROM THE JOURNALS

TRAVEL HEALTH INSURANCE: INDICATOR OF SERIOUS TRAVEL HEALTH RISKS
Rea A. Somer Kniestedt and Robert Steffen
J Travel Med 2003; 10:185-188.

All patient claims files were reviewed from 1997 to 1998, in the largest Swiss travel insurance company. This analysis offers an insight into travel health risks, allowing comparison of the occurrences of very different, serious, health problems abroad.

Travel health risks are poorly documented. Recent and detailed evaluations on an intercontinental scale have only been conducted for travelers diarrhoea.

Results

The records of 242 patients have been analyzed: 168 (69.4%) were due to illness: 74 (30.6%) due to accident. The most frequent illnesses were infections (n=62), cardiovascular (n=20), gastrointestinal problems (n=17), whereas by far the most frequently traumatized parts of the body were extremities (n=46), spine/pelvis (n=10), thorax (n=8), and (n=7).

Continuously increasing number of notifications for both illness and accident, with growing age. Cardiovascular illnesses and accidents to the extremities were observed far more often among those aged 60 or older.

Table 1 – Age Distribution for Illness and Accident

<table>
<thead>
<tr>
<th>Age years</th>
<th>Illnesses</th>
<th>Accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>30-40</td>
<td>52</td>
<td>21.5</td>
</tr>
<tr>
<td>60+</td>
<td>67</td>
<td>27.7</td>
</tr>
</tbody>
</table>

Surprisingly, accidents were not reported more in winter when ski and other snow accidents are prominent. Studies targeted at risk in senior travellers are needed: for instance, to determine incidence rates and circumstances of fractures and to conclude on preventive strategies. Insurance data would be even more useful for the adaptation of preventive strategies if the impact of the health problem, such as the need for evacuation, duration of incapacitation, proportion with permanent incapacity and case fatality rate would be available.

ALTITUDE ILLNESS

P. W. Barry, A. J. Pollard
BMJ Volume 326, 26 April 2003 bmj.com

Altitude illness is common in people ascending to above 2500 metres, especially if the ascent is rapid. In most cases it will manifest as a mild, self
limiting illness but in a few cases it will progress to more severe, life threatening forms. This article explains the symptoms and available treatments.

**Summary Points**

- Altitude related illness is rare at altitudes below 2500 metres but is common in travellers to 3500 metres or more.
- The occurrence is increased by a rapid gain in altitude and reduced by a slow ascent, allowing time for acclimatization.
- For most travellers, altitude related illness is an unpleasant but self limiting and benign syndrome, consisting chiefly of headache, anorexia, and nausea.
- More severe forms of illness including cerebral or pulmonary oedema may occur and may be fatal, particularly if not recognized.
- The treatment of altitude related illness is to stop further ascent and, if symptoms are severe or getting worse, to descend.
- Oxygen, drugs and other treatments for altitude illness should be viewed as adjuncts to aid descent.

**Children, pregnant women, and elderly people at altitude**

*Children*
- Any child who becomes unwell at altitude should be assumed to be having altitude illness a clear alternative diagnosis is obvious.

*Pregnant Women*
- There are very few data on the risk of traveling to altitude when pregnant.

*Elderly people*
- The risk of altitude illness does not seem to increase with increasing age.

**Pre-existing medical conditions and altitude illness**

*Cardiac disease*
- The risk of ischaemic heart disease in previously well trekkers is not increased.
- Angina of effort at sea level is likely to worsen at altitude, and ascent to moderate altitude may precipitate angina in patients with previously stable coronary artery disease.
- Tests such as an electrocardiogram have no benefit in predicting potential problems at altitude.

*Asthma*
- Asthma is generally unaffected by travel to altitude.

*Chronic obstructive airways disease*
- Exposure to altitude in itself does not worsen diabetes.

*Epilepsy*
- Altitude in itself does not increase the risks of seizures in patients with well controlled epilepsy.
A COMPARISON OF TRAVEL RELATED INFECTIOUS DISEASES ADMISSIONS IN GLASGOW: (1985; 1998/99)
J. H. Cossar, E. Wilson, D. H. Kennedy, E. Walker
Scot Med J 2003; 48:049-051, 26 April 2003 bmj.com

Abstract: A comparative study was made of patients admitted over 12 months to the principal infectious diseases unit for Glasgow in 1985 and in 1998/99. During this interval UK travel statistics show a 135% growth in visits abroad and a 5% rise to 17% in destinations with a risk of Malaria. Travel associated admissions rose by 96% to a total of 108. Patients of Asian/Oriental ethnicity declined from 55% to 18% whilst Caucasians increased from 38% to 81%. Travelers aged 20-39 years formed the model age group (51% and 50%). Gastro-intestinal problems accounted for the largest single diagnostic category in both study period, 385 and 40% respectively. In-patients diagnosed with malaria fell by 20%; these figures are cause for encouragement to those involved in the teaching and dissemination of advice on malaria prophylaxis. The findings re-enforce the need for the continuation and expansion of travel health education for both healthcare professionals and the public.

TRAVELLERS' KNOWLEDGE, ATTITUDE, AND PRACTICES ON PREVENTION OF INFECTIOUS DISEASES: RESULTS FROM A PILOT STUDY
European Travel Health Advisory Board
J Travel Med 2003; 10:75-78

Background: The European travel Health Advisory Board conducted a cross-sectional pilot survey to evaluate current travel health knowledge, attitudes, and practices (KAP) and to determine where travellers going to developing countries obtain travel health information, what information they receive, and what preventive travel measures they employ.

Method: Trained interviewers invited passengers at the departure gates of three international airports: London Heathrow, Paris Charles de Gaulle, and Munich to respond to self-completion questionnaire. A total of 609 responses were collected.

Results: The study showed that more than one-third of travellers questioned had not sought pretravel health advice and of those who did, 20% sought advice 14 days or less prior travel. One-third of the respondents were aged 50 or more, and 20% had planned their trip less than 2 weeks before leaving. Only a minority were able to demonstrate that they had been immunized as per the World Health Organization or national recommendations. Respondents often misperceived both the risk of malaria at the destination and recommended preventive measures.

Conclusions: The results of this pilot survey provided a valuable insight into the KAP of travellers and highlighted an important educational need among those travelling to risk destinations. Strategies are needed for raising awareness of preventable travel health issues and for raising compliance with existing recommendations.
A NEW THREAT FROM MOSQUITOES?

A scheme for stepping up the monitoring of foreign insects entering the UK: There is no evidence that Asian tiger mosquitoes are in the UK yet, but there is evidence that they have reached southern Europe. There is theoretical risk that if they established themselves in the UK, they could act as a vector for a number of infectious diseases – particularly Wets Nile virus.

Concerns about increased risk from the mosquitoes are linked to climate change. If the UK does become warmer, more species of insects could enter the country.

The disease is now prevalent in the US. Asian tiger mosquitoes have been spreading the disease there since 1985 when they were introduced via tyres brought from the Far East.

Factors which would reduce the likelihood of West Nile virus becoming established in the UK. Firstly, any Asian Tiger mosquitoes that enter the country are unlikely to bring the disease with them. It’s the mosquito eggs that will arrive and they are unlikely to be carrying any of the viruses everyone is panicking about, he said.

UK climate is not only too cold for the Asian tiger mosquito to breed, it is too cold for the Wets Nile virus to spread efficiently. Professor Gould explained: “temperature is important for transmission of West Nile virus.”

Many species of mosquito already present in this country, which are perfectly capable of being infected by West Nile virus. There has never been a reported case of West Nile encephalitis in the UK. Only 20 per cent of West Nile virus infections result in West Nile fever.

WHEN THE BATTLEFIELDS FEEL LIKE HOME

P. W. Barry, A. J. Pollard

BMA News 13 September, 2003

For many doctors who spend time working overseas, the real hardship is settling back into their working lives when they return to the UK, the transition is a challenge.

Many find adapting to coming home is far harder than going out of UK. Coming back can be disturbing and disabling. The level of hypervigilance experienced as a way of maintaining safety and that of patients is remarkable and that energy has no home when you return. You can’t quite place what or where the fear is coming from.

The imagery and symbols of war or famine can be almost as powerful as the normal tragedy and struggle they represent. The Culture shock of coming back can manifest itself in some strange ways.

“There I was a big fish in a small-pond, here a tiny fish in a huge pond. Out there everyone listened to what I said, here nobody cares remotely.”

Marked differences may exist between what she was able to do a few months
ago – both in terms of clinical impact and professional freedom – and what she is doing now.

The fulfillment of overseas work extends beyond feeling more empowered, and that one was making a difference. That is something doctors do not always experience here. Coming back from that can be a bit depressing. Walking back into your first surgery to encounter a load of intractable social problems may be difficult.

The overseas aid agency Médecins Sans Frontières is familiar with difficulties doctors experience after working overseas. They send healthcare staff to trouble spots all over the world and have evolved a system of peer support for those returning to their country of domicile.

If doctors are experiencing reverse culture shock, settling in problems or readjustment issues. People who spend a longer time working abroad, it can be harder to readjust. In the main health professionals readjust quickly.

After working in life-and-death situations they come across lifestyles problems, unsightly mole, sleep problems. The benefits gained from overseas working far outweigh any readjustment issues, the experience is seen as very valuable.

While none of them regret going out there, they do occasionally regret having to come back. What a lot of our doctors refer to as "proper doctoring" back to basics perhaps, but diagnosing and treating without some of the usual benefits of tests and scans. They relish the adventure and the challenge.

DRIVERS WARNED
scholl@myriadpr.com

British drivers have been warned that they are at risk of developing a DVT on journeys of four hours or more.

Dr Emile Ferrari, a cardiologist based at the Hospital Pasteur in Nice, found in a case-controlled study of 160 patients admitted for DVT, that almost 25% had recently completed a journey of more than four hours – the vast majority by car.

Results of the research, first published in the journals of the American College of Chest Physicians, indicated 39 of the patients had a history of travel in the four weeks preceding their illness – most (28) had journeyed by car, with nine going by plane and two by train.

The DVT patients were almost four times as likely to have had a trip in the past month than a control group.

Dr Ferrari concluded the findings pointed to a link between lengthy journeys by all modes of transport and increased risk of a DVT.
In 2003 France suffered the hottest summer of the last 50 years. French Institute of Health and Medical research said there had been 14,802 deaths related to the heat.

After 9th August the media began to track the raising death toll, especially among old people. However, most commentary was directed at the political fallout caused by the healthcare system’s lack of reaction to the situation.

French society places little emphasis on elderly people and public health policy. The adverse effects of the heat on trees and animals were emphasized much more than possible life threatening complications in old people. The difficulty for nuclear power plant production was given precedence over the strain placed on the healthcare system, which was stretched to the limit in terms of bed capacity and medical personnel.

International cross-border movement has reached two million people daily, one million people are moving between the borders of developing countries each week.
FROM THE 2003 CONFERENCES

THE ROLE OF TRAVEL CLINICS FOR SEXUAL HEALTH PROMOTION PRIOR TO INTERNATIONAL TRAVEL

K. Allison BSc PG Dip RGN, M. Jones MB,ChB, FRCP

Within Scotland in 1999, 59 new reports of HIV infection amongst heterosexual men and women were identified. This was the highest annual figures ever recorded and compares with an annual average of 54 during 1995-1998.

Of the 59 reported infections in 1999, 32 were acquired abroad. Twenty-two were contracted in Africa and this was the highest annual total ever recorded for imported infections amongst heterosexuals. In response to these figures the report of the HIV health promotion Strategy Group identified International Travellers as a particularly high-risk population and recommended that this group should be targeted.

Even though travel is demonstrably associated with increased risk taking behaviour prior to travel clients at this travel clinic were not aware of this. Sexual health is not perceived as an important issue for most travellers.

Travel clinics may have a limited role in the promotion of sexual health prior to International travel. A national campaign specifically targeting International Travellers, but linked with individual clinics, would be a more effective method of promoting sexual health.

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WHAT IS THE RISK TO THE TRAVELLER OF CONTRACTING TRAVEL MEDICINE IN BOARDING SCHOOLS

Penelope Codner, MSc, RGN, RM

Objectives: To find out if boarding schools pupils who live abroad receive relevant immunisations and malaria prophylaxis and if nurses in these schools have a role in providing travel health care.

Design: A descriptive survey, using a self-completion, structured, questionnaire.

Setting: Independent Boarding Schools in the United Kingdom.

Participants: School nurses in independent schools.

Main outcome measures: Numbers of boarding school pupils who have homes in regions of the world where immunisations and malaria prophylaxis are relevant; the provision of recommended immunisations and malaria prophylaxis to these pupils; the role of nurses in providing travel health care to boarding school pupils.

Results: 22% of pupils in the survey had homes in regions of the world where immunisations and malaria prophylaxis are relevant.

Responses from nurses showed some pupils did not receive recommended immunisations and malaria prophylaxis before going home. Reasons for this were:

- poor communication between parents, staff, pupils
- nurses were not always aware that pupils lived abroad

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parents did not always agree to the administration of immunisations
and malaria prophylaxis.

The nurses’ knowledge of travel health care and their experience in
providing was variable; some nurses had minimal involvement in travel health
care, while others appeared competent and confident to provide a range of
travel 50% of nurses did not complete the questionnaires sent to them.

Conclusions: Boarding school nurses need to be aware of the background of
their pupils and the health risks of travel. They should have adequate training
and experience to provide travel health services to all pupils who live or travel
abroad.

AN ASSESSMENT OF THE QUALITY OF TRAVEL HEALTH ADVICE
ON THE INTERNET, ENVIRONMENTAL HEALTH RISKS,
ACCIDENTS, INJURIES AND VIOLENCE

Jane R Doran MB, ChB

Objective: To discover the quality of travel health information concerning
environmental health risks, accidents, injuries and violence, on the Internet.

Design: Cross sectional survey.

Data Sources: Twenty-one Internet sites about travel health.

Main outcome measures:
  i. Quality of content – concordance with an international consensus
     of V best practice.
  ii. Other quality criteria (characteristics).

Results: The overall quality of information was poor. Despite containing
some useful information there were many omissions. The mean score was 30.5
(range 0 - 66) out of 78. Six out of twenty one sites displayed a code of
conduct, but only one had a merit award. The mean score for characteristics
was 5.9 (range 1-11) out of 11. The quality of information score for accidents
correlated with the quality of information score for environment, but the
quality of content score did not correlate with the characteristic score. The
sites were generally difficult to navigate.

Conclusions: The quality of travel health information presented on the
Internet is poor. There is a need for that information to be clearer, more full
and more easily navigable. Traditional quality criteria (characteristics) do not
indicate good quality information.

TRAVELLERS EXPERIENCES WHEN SEEKING MEDICAL ADVICE
OR TREATMENT WHILE OVERSEAS

C Kilpatrick, Nurse Specialist – Travel Health

Objectives: To describe the experiences of travellers when seeking medical
advice or treatment while abroad

Methods: A prospective study carried out in a large travel clinic in Glasgow,
Scotland, incorporating quantitative and qualitative approaches.
Summary of results: The total number of eligible travellers was 273. The return rate for the study was 55%, with analysis being conducted on a total of 147. Of these, 54% (79/147) experienced some kind of medical problem while travelling. Fellow travellers were the most common source of medical advice or treatment (n=8), with a total of 25% seeking medical advice or treatment from a variety of sources. Therefore, 75% of travellers chose to self treat. Significantly, those in younger age groups (<35 years) were more likely to seek medical advice or treatment for problems encountered (p = 0.03), with those on package holidays less likely to seek medical advice or treatment for problems encountered in comparison to those who undertake trips for other reasons (p = 0.004). Qualitative analysis of open text statements produced three main themes in relation to medical advice or treatment, which were ‘Access’, ‘Confidence in Conditions’ and ‘Concerns’.

Conclusions: Due to the small sample size, recommendations cannot be presented. However, valuable, descriptive information on this subject has been gathered, which should be taken into account by those working in the travel health profession until further work is carried out in this area.
BOOK REVIEWS

TRAVELLER’S HEALTH: HOW TO STAY HEALTHY ABROAD
Fourth Edition – edited by Dr Richard Dawood

Fourteen chapters cover every aspect of travel awareness and prevention, and looking ahead to future emerging infections and disease eradication. Much information on diseases and contacts, immunisation and prophylaxis is available risk. Attention is given to accidents, the big risk to travellers and the main cause of death, injury and serious ill health. Cases reported, over a year, to Green Flag Travellers Medical Service from abroad, show diagnoses, and emphasise that only 0.5% involve tropical or exotic infections. Accounting for much international morbidity malaria affects relatively few global travellers but it is a killer of UK citizens. A comprehensive account of the disease, its prevention, diagnosis and treatment is included, with dangerous misdiagnoses and some common medical pitfalls highlighted.

Appendices include distribution of infectious disease and medical kits. Very moderately priced this is a valuable resource for traveller, advisor and a crucial acquisition for the student.

BOOKS FOR CHILDREN TRAVELLING ABROAD

TRAVELLING ABROAD WITH CHILDREN: THE COMPLETE GUIDE
Samantha Gore-lyons (Arrow, £7.99)

TRAVEL WITH YOUR BABY
Geared to holidays, focused squarely on under-fours. (Fodor’s £8.99)

YOUR CHILD’S HEALTH ABROAD: A MANUAL FOR TRAVELLING PARENTS
Dr Jane Wilson-Howard and Dr Matthew Ellis (Bradt, £8.95)

A sensible approach to the maintaining the health of small children while they are overseas.Useful reminders for the health professional as well as the parent.

TAKE THE KIDS TRAVELLING
Helen Truszowski (Cadogan, £14.99)

The best presented of the books, but there is much inconsequential detracting verbiage.

TRAVEL WITH CHILDREN
Cathy Lanigan (Lonely Planet, £8.99)

Two-thirds of this book guide covers country-specific information.
PSYCHOLOGICAL PERSPECTIVES ON FEAR OF FLYING
Robert Bor and Lucas van Gerwen. Hardback 0754609030

This authoritative work examines the psychological determinants and effects associated with the “fear of flying”. The contents include:
• The extent and nature of the problem of fear of flying;
• Understanding public perceptions of safety associated with flying;
• Assessment of clients; psychological treatment approaches;
• The use of specific interventions (e.g. virtual reality) and clinical case studies.
It is an up to date and wide-ranging handbook, covering theory, research and practice. The international panel of authors are all experienced researchers and clinicians, and are leaders in their respective fields. The book is intended for those who work professionally in commercial and military aviation. A secondary audience includes researchers, professionals with an interest in anxiety/phobia, travel health clinic nurses.

PASSENGER BEHAVIOUR
Robert Bor. Hardback 0754609367 (Ashgate Publishing, Abingdon)

With 2003 being the 100th anniversary of modern aviation, Passenger Behaviour is published at a timely milestone for the aviation industry.

This book examines a wide range of topics that help the reader to acquire a psychological understanding of how air travel disrupts human relationships, behaviour as well as bodily functions. As air travel being an integral part of most people’s lives, this book will be of interest of anyone who travel either on a frequent or infrequent basis.

Contents: Legal aspects of passengers behaviour, Flying-related stress, the airline industry and impact on passenger behaviour, fear of flying psychological and psychiatric difficulties among airline passengers. Air rage post-9/11, Passengers behaviour in emergency situations, the psychological impact of aircraft disasters, effects and consequences of the cabin environment.

BUGS, BITES AND BOWELS
Jane Wilson-Howarth (Cadogan Guides)

Written by a member of the BTHA Council much experienced in expeditioning and world wandering this inexpensive book concisely covers a wide range of travel health subjects. Contents are easily accessible and well laid out. Although perhaps too comprehensive and mind boggling for lay travellers, the book holds much of practical interest to health professionals and would prove a valuable addition to the travel health clinic library.

PRESENTING HEALTH WITH POWERPOINT – A GUIDE FOR HEALTH PROFESSIONALS
Allan Gillies (Radcliffe Medical Press Abingdon)

Travel health professionals have a prime objective to disseminate information and educate the travelling public. With slide viewing becoming obsolete, IT skills are a necessary prerequisite in presenting material to wider audiences.
Powerpoint is the means to create attractive on screen presentations to impress lay and professional viewers. This book, complete with back-up disc, is a valuable aid to mastering slide creation techniques. Well laid out with many descriptive illustrations it provides easy to use, step by step instructions which are as idiot proof as one can hope for in the IT jungle. An indispensable acquisition for the novice.

THE HIGH ALTITUDE MEDICINE HANDBOOK
A. Pollard D. Murdoch Radcliffe (Medical Press, Abingdon)

The third edition of a paper back handbook which comprehensively covers the many topics affecting health in the worlds highest places. Compulsory reading for those who venture into the mountain wilderness and doctors who accompany trek and climbing parties, there is much within its contents to interest other travel health professional with clients venturing to altitude. It deals in depth with acute mountain sickness its prophylaxis and treatment and considers many other altitude related disorders. From hypothermia to high altitude cough. These is a good information on children, the pregnant, the cardiac and asthmatic travelling into this hostile environment and will prove a very useful reference book in the travel clinic.

I.M.

Reflective learners transform as the world around them changes: poor learners simply complain about it.
(Coping with complexity. BMJ 2001, 323.)
BTHA UPDATE

AWARD OF HONORARY FELLOWSHIP STATUS
TO
BTHA MEMBERS

Criteria for fellowship: Any one of the following:

Personal pioneering publications, research reports or projects in the travel health field by a member, considered by Council to merit recognition by the association.

Sustained meritorious endeavour by a member in promoting the objectives of the association and/or advancing its status.

Prolonged, industrious service to the association in a formal capacity.

Meritorious completion of commissioned research or projects instituted by the association to meet its constitutional objectives.

Protocol

Nominations will be presented to the educational sub-committee of the council and successful nominations proposed for consideration of council.

Nominations may be made from:

- council,
- any 3 members of the association in good standing.

Nominees must:

- Have been members for at least 4 years.
- Be in good standing within their profession.
- Be in good standing in the association.
- Meet at least one of the criteria for fellowship.
- Be prepared to submit evidence of travel health related research, professional or project achievement where appropriate, for assessment by the educational sub committee.

Following recommendation by the educational sub-committee, the award shall be made by a majority vote of council and recorded in the minutes. A register of Fellows kept by secretary.

Fellows will be entitled to:

- Award of a certificate.
- Free entry to Annual and regional BTHA Conferences.

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CERTIFICATE RECOGNISES EXCELLENCE

The International Society of Travel Medicine (ISTM) offered its first international certificate of Knowledge in Travel Medicine by examination on 7 May 2003.

The exam recognises excellence in travel medicine knowledge and successful candidates receive a Certificate in Travel Health™ (or CTH™). It is open to all licensed travel medicine practitioners, including physicians, nurses, pharmacists and others. The exam’s focus is on pre-travel health advice. The scope is international, no courses or training classes are required, but experience in the field is advantageous.

For further information or see some sample questions, visit: www.istm.org

THE NATIONAL TRAVEL HEALTH NETWORK AND CENTRE (NATHNAC)

Aims and objectives of NaTHNaC

The centre was launched in April 2003. The overall key goal of NaTHNaC is to protect the health of British travellers and the initial aims of the Network and Centre are to:

- develop consistent and authoritative national guidance on general health matters for health professionals advising the public travelling abroad;
- disseminate widely the above guidance;
- provide guidance on specific situations relating to health of travellers;
- carry out surveillance of infectious and non-infectious hazards abroad (concentrating on types of traveller, types of destination and types of hazard) and producing accessible regular outputs of such surveillance;
- administer the yellow fever vaccination centres;
- engage the major stakeholders concerned with travel health especially the travel industry, insurance industry and other government bodies, to assist both in sentinel surveillance and to engage in constructive dialogue towards a unified prevention approach;
- facilitate, in collaboration with other training providers, the training of health care and other personnel in the provision of best quality travel health advice, based on such evidence as is available;
- define short-term and long-term research priorities in relation to the above.

The first priority for the centre has been to set up the telephone advice line service for health professionals and to develop more detailed guidelines for travellers with special needs.

Telephone advice line for health professionals only
020 7380 9234
Times of service: 9am – 12.00 noon
Administration of the yellow fever vaccination centres is due to be transferred from the Department of Health to NaTHNaC during 2003.

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**EUROPEAN TRAVEL HEALTH ADVISORY BUREAU**

ETHAB met for the first time earlier this year and established as its aim to:

1. foster the continuing development of travel health medicine as an independent interdisciplinary field, and
2. to act as a complementary resource for existing travel medicine and governmental advisory bodies and the travel industry.

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**INTERNATIONAL PORTER PROTECTION GROUP**

A Nepalese porter was hit by altitude sickness while carrying a heavy load for tourists. Rapid descent is the effective and simple cure for altitude sickness but an unsympathetic trek sirdar made him climb on, then left him to descend alone as he deteriorated. He became comatose, was rescued by passing trekkers and woke in hospital to find that his frostbitten feet had to be partially amputated. Early this year in a similar episode a porter in Nepal was found unconscious by the side of a trail. He had been required to carry his load until unable to go further he collapsed and died.

The International Porter Protection Group (IPPG) (www.ippg.net) and the Himalayan Explorers Connection (HEC) (www.hec.org) have been created to improve conditions for porters. They have established Clothing banks, provided safety education, and shelters, including a porter rescue post in an area where many porters have lost their lives. Nepali porters are now beginning to be rescued by helicopter. Some trekking companies are now providing tents for their porters and have food cooked for them by the trekkers’ kitchen staff. Doctors and nurses providing medical cover for trekking tourists should be aware of an additional responsibility to the supporting group porters.

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