

# Mortality and non-infectious morbidity in travellers

## KEY POINTS

- On average, nearly 4,000 deaths of British nationals required consular action by the Foreign and Commonwealth Office (FCO) each year between 2001/02 and 2005/06. This is likely to be an underestimate of total deaths occurring abroad and does not distinguish between deaths in short term travellers and expatriates. Specific studies have shown that younger people tend to die from road traffic accidents while older people are more likely to die from illness resulting from pre-existing conditions.
- In terms of incidents abroad requiring consular assistance by the FCO, the majority were registered in Spain.

## International perspective

In 2002, the leading cause of death in adults between 15 and 59 years of age worldwide was HIV/AIDS (2.3 million), followed by ischaemic heart disease (1.3 million), tuberculosis (1.0 million), road traffic accidents (814,000), and cerebrovascular disease (783,000). In adults over 60 years of age, the leading cause of death worldwide was ischaemic heart disease (5.8 million), followed by cerebrovascular disease (4.7 million), chronic obstructive pulmonary disease (2.4 million), lower respiratory infections (1.4 million), and trachea, bronchus, and lung cancers (928,000). Leading causes of morbidity were similar to causes of death, with unipolar depressive disorders also featuring in the top five leading causes of morbidity in adults aged between 15 and 59 years (57.8 million disability-adjusted life years [DALYs]), and Alzheimers and dementia-related conditions featuring in the top five causes of morbidity for adults aged over 60 years (8.6 million DALYs)<sup>1</sup>. There is some variation in these figures between males and females and between different regions of the world.

Injuries cause at least 5 million deaths every year worldwide<sup>2</sup>. The burden of injuries falls disproportionately on the poor; over 90% of injury-related deaths occur in the poor, mainly in low- and middle-income countries but also in the poorer populations in wealthier countries. In 2002, an estimated 1.2 million injury-related deaths (23% of the total) were due to road traffic accidents; a further 20 to 50 million people suffered injuries or were disabled as a result of road traffic accidents. In 2002, road traffic accidents were the 11th leading cause of death (in all ages) worldwide. Countries in the WHO Western Pacific region and the WHO South East Asia region account for more than half of all road traffic deaths in the world<sup>3</sup>. After road traffic accidents, falls were the second leading cause of injury-related deaths worldwide in 2002 (391,000 deaths), followed by drowning (376,000)<sup>4</sup>. In Europe, an estimated 3,800 tourists (of all nationalities) die in European Union countries (EU15) each year, with around 30% of tourist fatalities resulting from injuries<sup>4</sup>.

# Mortality and non-infectious morbidity in travellers from the United Kingdom

Routine surveillance of non-infectious illness in travellers in England, Wales, and Northern Ireland is not currently undertaken, and therefore no specific surveillance data are available for analysis for this report.

## Source of data

- Data on deaths that occurred abroad in British nationals as well as some limited information on other events that British nationals have sought assistance for while abroad was available from the United Kingdom Foreign and Commonwealth office (FCO). The FCO collect limited information on deaths that occur abroad, but they are not, at present, classified by cause. Local authorities in non-Commonwealth countries are obliged to inform Consuls, without delay, of the death of a British national. British nationals will be either short-term travellers from the UK, or most often expatriates. Most Commonwealth countries' local authorities notify Posts of deaths only when there are suspicious circumstances, which the police will investigate. The exceptions are Australia, Canada, and New Zealand, where there is no notification process at all [FCO Consular Handbook, FCO, personal communication, August 2005].

## Results

### Deaths in British nationals

FCO data are reported by financial year; on average, between 2001/02 and 2005/06, there were 3,906 deaths in British nationals that required action by consular staff each year [FCO, Personal communication, June 2007]. Action taken is defined as: identification of body, repatriation of remains, phoning relatives, or help with funeral arrangements, *etc.* Of those, on average, only 430 deaths are actually registered with the Consul.

These figures underestimate deaths abroad as many (both natural and non-natural) may not be notified to British Consulates. There are around 13 million British nationals living overseas<sup>5</sup> and it is likely that many more than 3,906 die each year. A crude, non-standardised, calculation of the death rate in England and Wales in 2005 was 9,600 per million population. It is therefore likely that a similar rate of death will occur in nationals living overseas.

There were some overseas events recorded that resulted in 165 confirmed deaths of British nationals. In December 2004, an earthquake occurred off the north west coast of Sumatra in Indonesia. This induced a tsunami that struck the coast of 13 countries in the Indian Ocean<sup>6</sup>. At the time, there were around 10,000 British nationals staying in the area; 150 people died (140 in Thailand (ten were of dual British and Thai nationality), 17 in Sri Lanka, and three in the Maldives). One other person is believed to have died in Thailand but this is unconfirmed. It is unknown how many suffered injuries. Other events reported that resulted in deaths of British nationals are listed below<sup>5,7</sup>:

- In July 2005, a bus bomb in the Turkish resort of Kusadasi killed five people (including one British national and injured 18 (including one British national).
- In July 2005, three bombs exploded in Sharm al-Sheikh in the Sinai Peninsula, Egypt; 63 people were killed (including 11 British nationals) and 124 others were injured.
- In August 2005, Hurricane Katrina struck New Orleans, Louisiana, USA which devastated the city causing hundreds of deaths including one death of a British national.
- In October 2005, three suicide bombers attacked central Kuta and Jimbaran beach in Bali, Indonesia, which resulted in 20 deaths (including one British national) and injured 90 others.
- In October 2005, an earthquake occurred in the Indian and Pakistani-administered Kashmir and Pakistan's North West province which killed thousands of people and left over 3.5 million homeless; one British national was killed.

## British behaviour abroad

The FCO published a report in 2006 on British behaviour abroad in the year from April 2004 to March 2005<sup>8</sup>. The top ten countries where British citizens required the most consular assistance were recorded. The most cases where assistance was required were recorded in Spain (11,837 cases), followed by the United States (9,540), Italy (3,375), Greece (3,306), France (2,819), Germany (2,378), Thailand (2,054), United Arab Emirates (1,923), Mexico (1,832), and New Zealand (1,717). Most requests for assistance involved loss of passport or other general enquiries. Spain is the most visited country by British tourists (estimated 16 million visits during this period) which may account for the high number of requests for assistance. The majority of assistance requests were for general advice, which could be anything ranging from visa queries to documentation assistance or money transfers, *etc.* The most death-related assistance cases were in Spain (1,663), followed by France (294), Thailand (274, mostly as a result of the tsunami), and Germany (255). The most hospitalisation-related assistance cases were in Spain (1,137), followed by Greece (841), Thailand (196), and France (214). All the cases mentioned above are only those where the FCO have been involved so it is probable that the actual numbers of deaths/hospitalisations will have been higher.

## Other risks

Mass gatherings may pose a risk for the traveller in terms of accidental injury as well as infectious illness. Around 25,000 people travel from the UK to Mecca in Saudi Arabia for the Hajj pilgrimage every year<sup>9</sup>. Around two million people may be present from all over the world to perform the rites, which can be very strenuous and the overcrowded conditions have resulted in injuries and deaths from crushing and stampeding in past years<sup>10</sup>. (In the past the Hajj has also been associated with outbreaks of meningococcal meningitis serogroup W135, which, in 2002, resulted in a requirement by the Saudi Arabian Ministry of Health for all those attending Hajj to be vaccinated with a quadrivalent vaccine in order to obtain a visa for the event<sup>11</sup>. There were two cases of meningitis associated with the outbreak strain reported in 2003<sup>12</sup>, but since then, no further cases have been reported. Mass gatherings such as this also increase the risk of gastrointestinal infections and other respiratory infections such as influenza.)

Travellers are increasingly travelling to high altitude locations, which means the risk of altitude illness may be increased in the travelling population. The incidence of acute mountain sickness (one type of altitude illness) can range from 10%-40% in moderate altitude ski resorts to 25%-35% in high altitude destinations such as Lhasa, Tibet or La Paz, Bolivia<sup>13</sup>.

## Conclusion

This report particularly focuses on infectious diseases in the traveller, such as travellers' diarrhoea, malaria, and others, which account for a considerable burden of morbidity in UK travellers. Accidents and injuries (of varying types), and illness resulting from pre-existing conditions, however, are also important to consider when thinking about the hazards that travellers may be exposed to while abroad. National surveillance of accidents and injuries occurring in travellers is not currently undertaken in England, Wales, and Northern Ireland as there are difficulties associated with conducting surveillance of this nature. Many injuries and illnesses may be treated in the country of travel and therefore may not come to the attention of a medical practitioner in the UK; they may, however, come to the attention of travel insurance companies. There are a large number of travel insurance companies in operation in the UK that collect data about claims made by injured travellers, but this information is not readily available. Specific studies are the best source of data on deaths and accidents occurring in travellers, and have shown that younger people tend to die or suffer injuries from road traffic accidents, while older travellers tend to die of illness related to pre-existing conditions, *eg* cardiac problems, diabetes, *etc*<sup>14-17</sup>. This is consistent with the data relating to causes of mortality and morbidity worldwide. The occurrence of deaths and injuries in travellers are often unpredictable and may be difficult for the individual to prevent, especially those resulting from natural disasters or terrorist attacks. Other types of injuries, and illness resulting from pre-existing conditions, may be easier to prevent by the individual, for example by obtaining a thorough medical check-up before travel and by making sure that the appropriate medications are taken while abroad. Common sense advice on how to avoid accidents such as road traffic accidents, falls, and drowning should be sought; there is some evidence to suggest that some UK travellers may be putting themselves at increased risk of accidents due to increased drug and alcohol use while abroad<sup>18</sup>. Further information about prevention of accidents and injuries for the individual traveller is available from the National Travel Health Network and Centre<sup>19</sup> and general accident prevention advice is available from the Royal Society for the Prevention of Accidents<sup>20</sup>. Other risks which travellers should be aware of, if appropriate to the destination, could include deep vein thrombosis on long haul flights, sun-associated problems, animal bites and stings, and effects of extremes of temperature. It is wise for the traveller to familiarise themselves with possible hazards in the country they are visiting before they travel. Comprehensive security advice for all countries is available from the FCO<sup>7</sup>.

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