Attendances to Emergency Departments by Ill or Injured Travelers Returning From Abroad

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International tourist arrivals reached an all time high of 763 million worldwide in 2004.[1] British nationals made 60 million trips abroad[2] of which 90% were to Europe, 5% to the United States, and 5% to the rest of the world. The most popular destinations were Spain and the Canary Islands.[3]

An average of 1,861 UK citizens die abroad each year and far more suffer illness or injury.[4] While data on mortality and on morbidity from infectious diseases are recorded, there are fewer sources of data giving information on morbidity associated with noninfectious hazards experienced by UK citizens traveling abroad.

Over 2 million UK travelers consult their general practitioner annually at a cost of £11 million.[5] However, the burden on emergency department (ED) services is not known, nor is the proportion of morbidity that may be preventable.

Wishaw General is a Scottish district general hospital with 66,000 new patient ED attendances per annum. We sought to examine the burden travelers returning from abroad place on the department and the nature of the pathology with which they attend.

Methods

The audit was carried out prospectively over 6 months from February 1 to August 1, 2005, a period corresponding to one rotation of junior doctors through the department. We included all patients who normally reside locally, who presented to the ED with a complaint related to travel outside the UK, be it an illness or injury.

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Doctors completed a questionnaire at the time of the consultation. All eligible patients were included; 14 doctors collected data. The following information was obtained—age, gender, destination and purpose of travel, a history of the illness or injury, whether patients had sought medical help while abroad, and the need for admission and follow-up.

Results

Fifty-nine patients were included with an age range of 2 to 72, mean age of 36 years of age. Eleven were children 16 years or younger, 18 were 16 to 35 years, 23 were 36 to 60 years old, and 7 were older than 60. Thirty-two were female and 27 male. Fifty-seven (97%) patients had been on holiday. Only two had traveled for work, one to India and one to Ukraine. The locations visited are given in Table 1.

Forty-five patients (76%) had sustained an injury, while 14 (24%) suffered illness. Thirteen patients (22%) required admission. There was no significant difference between the ages of patients who were either injured or ill, nor between those admitted or discharged (two-sample t-test $p = 0.90$, $p = 0.69$).

Of the injured patients, 32 (71%) had limb injuries, 4 had injuries to the thorax/abdomen/pelvis, and 3 to the head and neck. Eighteen patients had fractures, 15 soft tissue injuries, 6 open wounds, 3 insect bites, 2 sunburn, and 1 a damaged plaster cast. Three patients required admission as a result of their injuries, 14 were referred to fracture, and 3 to ED clinic.

Of 14 patients with illness, 3 presented with conditions related to their flight. Two had become suddenly short of breath while flying, one with a pneumothorax, and one with a pulmonary embolism. A third presented with deep venous thrombosis. These patients had returned from Spain, The Gambia, and Florida, respectively.

Table 1 Regions visited by the ill and injured travelers

Region visited	Number (%)
European Union	32 (54)
Europe—Canary Islands	8 (14)
Europe—other non-European Union	6 (10)
Caribbean	3 (5)
North America	3 (5)
Indian subcontinent	2 (3)
Africa	1 (2)
Australasia	1 (2)
Central America	1 (2)
Central Asia	1 (2)
Middle East	1 (2)
Total	59 (100)

Three patients suffered from food poisoning, a notifiable condition, of whom two had contracted nontyphi *Salmonella*. Three patients were systemically unwell; one with lethargy, rash, and anorectia; another with headache, fever, and confusion; and a third with urinary tract infection and acute renal failure. There was one case each of pancreatitis related to alcohol excess, epididymal orchitis, conjunctivitis with corneal ulcer, exacerbation of asthma, and otitis media.

Only 15 patients (25%) had sought medical help for their condition while abroad. Of the 13 patients who required admission, only 3 had sought help. None of the patients with illness severe enough to require admission had obtained help while abroad, nor had six (33%) of those with radiographically proven fractures. A summary of patients requiring admission indicating who had sought help while abroad is given in Table 2.

Conclusions

Ill and injured travelers returning from abroad made up only 0.18% of the departments workload and 0.14% of hospital admissions over the study period. Small though this is, a percentage that may be preventable.

Two patients presented with thromboembolic complications deemed to be related to their flight. Both were aged 37, had other risk factors, and had flown over 5,000 km. This concurs with other studies suggesting that deep venous thrombosis and pulmonary embolism are uncommon but do occur after longer flights.[6–8]

Remarkably few people sought help while abroad even if they had an injury or illness severe enough to require admission to hospital. This is true even among those who traveled within the European Union and were entitled to an emergency treatment with the European Health Insurance Card.[9] This is concerning as delay in seeking medical care may cause a further clinical deterioration that may be avoidable. We did not record the length of time between arriving back in Scotland and attending the hospital, but it was apparent that many presented straight from the airport.

The main limitations to this audit were first that our numbers were not large enough to perform a

Table 2 Illness or injury suffered by the 13 patients (22%) who were admitted, indicating the 3 patients who had sought help while abroad

Illness or injury	Sought help abroad	Country visited
Injury		
Infected wound after ORIF olecranon abroad	Yes	Australia
Bimalleolar ankle fracture requiring ORIF	Yes	Portugal
Elbow fracture requiring ORIF	Yes	Kos, Greece
Closed head injury	No	Lanzarote
Flight-related complication		
Pneumothorax on flight, requiring chest drain	No	Spain
Pulmonary embolism	No	The Gambia
Deep venous thrombosis	No	Florida, USA
Illness		
Adults		
Confusion, urinary tract infection, acute renal failure	No	Spain
Exacerbation of asthma	No	Majorca
Pancreatitis, probably alcoholic in origin	No	Tenerife
Headache, fever, and confusion	No	Tenerife
Children		
Systemically unwell, lethargy, rash, anorexia	No	Spain
Child with gastroenteritis and dehydration	No	Cyprus

ORIF = Open reduction and internal fixation.

more detailed analysis and second that we did not think to ask patients why they were reluctant to seek help while abroad. We could also have asked what delay there was between return home and presenting to the ED and looked to see what proportion of morbidity was preventable.

Interestingly, only the two travelers with *Salmonella* infection would have been reported as notifiable disease. This reinforces the point that the burden of returning travelers on emergency departments, albeit small, is underestimated by current reporting systems. As infectious diseases contributed only a small percentage of the clinical caseload, using this measure as a proxy underestimates the burden of morbidity within this cohort presenting to the A&E department.

Declaration of Interests

The authors state they have no conflicts of interest.

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