French residents are inadequately trained in the prevention of complications related to air travel

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Dear Editor,

Medical issues related to air travel are estimated at about 350 annually, corresponding to 1/14,000–40,000 passengers [1]. Specific conditions of air travel – biophysical in particular – are responsible for most of these medical issues [2,3]. In healthy subjects, the physiological impact of these situations is usually asymptomatic [1]. But air travel can put some patients (i.e. patients with underlying conditions and multimorbid patients) at risk of medical emergencies [2]. General practitioners (GPs) are usually the first physicians consulted before air travel [4,5]. We therefore sought to evaluate general-practice residents' knowledge about air travel related diseases and to explore the factors associated with this knowledge.

In this letter we report the results of an anonymous survey of general-practice residents we ran in the greater Paris area in 2013. The questionnaire was divided into four principal sections with 10 questions in total: demographic characteristics, travel-medicine education, knowledge regarding diseases related to air travel, and prevention of these complications. Every resident was attributed a grade of knowledge ranging from 0 to 20 by summing 1) the number of correct answers regarding diseases related to air travel among the 17 proposed and 2) the number of correct responses concerning times to respect before three events and flight: a) myocardial infarction without complications; b) abdominal surgery and c) scuba diving. Internal consistency of the grading system was satisfactory (Cronbach alpha = 0.70).

Among the 600 surveyed residents, 392 answered (response rate 65%). The mean knowledge grade was 6.5 ± 3.2 (out of 20), with the highest grade 16. Having an experience of pre-travel consultation was the only factor associated with a grade above versus below the median ($p = 0.01$) (Table 1). There were no significant differences between the two groups regarding the other factors. About 2% ($n = 8/92$) of residents reported having benefited from a specific training in pathologies related to air travel. On our sample of respondents, we found that re-

sidents had poor knowledge of diseases related to air travel. Having the experience of pre-travel consultation was the only variable associated with residents' knowledge and our result underlined that medical education regarding this specific topic remains insufficient. Even though, much of pre-travel consultation is assured by GPs, lack of medical education regarding diseases related to air travel could negatively affect prevention in primary care. For example, several measures, such as pulse oximeter and the 50-m walk test, are available in the primary care setting to assess patients need of supplemental inflight

Table 1
Characteristics of the study population.

	TOTAL	GRADE ≤ 6	GRADE > 6	p
N (%)	392	211 (53.8)	181 (46.2)	
Age				
< 26 years	207 (52.8)	110 (53.1)	97 (46.9)	0.7731
≥ 26 years	185 (47.2)	101 (54.6)	84 (45.4)	
Gender				
Male	108 (27.6)	50 (46.3)	58 (53.7)	0.0652
Female	284 (72.5)	161 (56.7)	123 (43.3)	
Residency year				
First	79 (20.2)	46 (58.2)	33 (41.8)	0.6392
Second	183 (46.7)	98 (53.5)	85 (46.4)	
Third	130 (33.2)	67 (51.5)	63 (48.5)	
Faculty				
Paris 5	110 (28.1)	60 (54.5)	50 (45.4)	0.7110
Paris 6	86 (21.9)	46 (53.5)	40 (46.5)	
Paris 7	88 (22.5)	53 (60.2)	35 (39.8)	
Paris 11	24 (6.1)	11 (45.8)	13 (54.2)	
Paris 12	32 (8.2)	15 (46.9)	17 (53.1)	
Paris 13	21 (5.4)	9 (42.9)	12 (57.1)	
PIFO	31 (7.9)	17 (54.8)	14 (45.2)	
Self reported experience of pre-travel consultation				
Never	255 (65.2)	149 (58.4)	106 (41.6)	0.0103
Often or occasionally	136 (34.8)	61 (41.6)	75 (55.1)	

oxygen [6]. Evaluation of fitness to fly is important for patients with underlying.

Contributors

DN and CR designed the study. DN, FL and YY drafted the paper. All authors revised and reviewed the paper.

Declaration of interests

The authors declare no conflict of interest.

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