

THE CROSS-SECTIONAL STUDY OF HIGH-RISK DISEASES IN CIVIL AVIATION PILOTS

LA RECHERCHE À SECTION TRANSVERSALE DES MALADIES À HAUT RISQUE PARMIS LES PILOTES DE LIGNE

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Introduction: Focusing on civil aviation pilot health is one of the most important works in airline safety. This study aimed at understanding the prevalence and characteristics of high-risk diseases, which may cause pilots grounded or disabled.

Methods: According to our HSMS (health safety management system), which provides the items of high-risk diseases, we collected the medical record of physical examination, including age, area, flight hours, physical conclusion and diseases of each pilot in our company in 2016. The statistical analysis we chose were descriptive statistics, Chi-square test and nonparametric test and the software was SPSS20.0.

Results: There were 5889 Chinese pilots in service. The prevalence of cardiovascular disease was 9.7% (hypertension accounted for 5.36%), ranking the first among all the high risk diseases, followed by cholelith disease (0.9%), brain disease (0.6%), type 2 diabetes (0.5%) and urinary calculi (0.3%). The prevalence of cardiovascular disease increased with age and reached the highest in the 50-plus age group, 40.1%. The prevalence of cardiovascular disease in Dalian was 22.0%, which was higher than other regions, and the province of Heilongjiang and Henan were followed with 14.1% and 13.6%, respectively. The prevalence of cholelithiasis in Guangzhou, Hubei and Xi'an were 2.82%, 2.55% and 3.33%, respectively, and higher than the other areas. Flight hours of pilots with cardiovascular diseases, brain disease and urinary calculi were less than pilots with no disease, respectively. The difference above was statistically significant ($p < 0.05$).

Conclusion: The prevalence of cardiovascular and cholelith disease were the top two among high-risk diseases, and the distribution of regions was different. In the future, it is necessary to find out targeted measures to reduce the prevalence of high-risk disease to keep airline safety.