In-flight cardiopulmonary resuscitation during commercial air transport: consensus statement and supplementary guideline from the German society of aerospace medicine (DGLRM)

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Background and Goal of Study: Approximately 3 billion people worldwide will travel by commercial air transport in 2016. A calculation based on the number of passengers transported shows that between 1 out of 14,000 to 1 out of 50,000 passengers will experience acute medical problems during a flight. Cardiac arrest accounts for 0.3% of all in-flight medical emergencies, yet it is responsible for 86% of in-flight events resulting in death. So far, no guideline for in-flight cardiac arrest (IFCA) does exist providing specific treatment recommendations.

Materials and Methods: A task force was created to develop a guideline for the treatment of in-flight cardiac arrest based on clinical and investigational expertise in this area. By using a systematic literature search including GRADE, RAND, and DELPHI methods, specific recommendations for the treatment of IFCA have been created.

Results and Discussion: Several main recommendations have been developed: emergency equipment location as well as content should be mentioned in the pre-flight safety announcement; ECG should be available for patients with cardiac arrest, it is very important to request help by an onboard announcement after identification of a patient with cardiac arrest; two-person CPR is considered optimum and should be performed if possible; the crew should be trained regularly in basic life support - ideally with a focus on CPR in aircraft; a diversion should immediately be performed if the patient has a return of spontaneous circulation.

Conclusion(s): This is the first guideline providing specific treatment recommendations for in-flight medical emergencies during commercial air travel.