

## Preparedness for sudden cardiac arrest at sports arenas: A survey in Turkey

To the Editor,

There are more than 265 million registered football players worldwide and football receives excessive media interest (1). In Turkey, football is the sport with the most licensed players (2). The true incidence of sudden cardiac death (SCD) among footballers is not known (3). However, prospective research has reported the incidence of SCD among athletes as 2.3/100000 per year with 2.1/100000 cases related to cardiovascular system-related causes (4).

Of SCD cases, 90% were in ventricular fibrillation (VF). The possibility of successful defibrillation is reduced over time, and early defibrillation is one of the most important factors in survival after cardiac arrest. Mortality increases by 10–12% with each minute between collapse and defibrillation. As a result, it is important that an automatic external defibrillator (AED) that is appropriate for use by people who are not health personnel is located in places with a high possibility of SCD.

The aim of our study was to assess the approach to sudden death events observed on the field at Turkey's football clubs. Our secondary aim was to gain information about the current situation regarding the effective use of health equipment. Football clubs registered in the professional league in Turkey were asked to complete a 12-question survey. The existence of a medical action plan (MAP), the presence of an ambulance during a match or workout, the level of emergency medical training of club personnel, and the availability of AEDs in the arena were surveyed. Of 89 clubs, 58 (65.1%) were included in the study. Thirty-six of these 58 clubs (62.1%) reported the existence of a written MAP. While there was a MAP for all Super League teams, this rate fell to 66.7% in 1<sup>st</sup> League teams, and was 40% in 2<sup>nd</sup> League and 46.7% in 3<sup>rd</sup> League teams. An ambulance is always present during Super League, 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> League matches. During workouts, the presence of an ambulance is routine for Super League clubs and for some 1<sup>st</sup> League clubs. There is no ambulance present during workouts in other leagues. Cardiopulmonary resuscitation (CPR) training programs were reported by 27.6% of clubs. Only 5.2% of stadiums have an AED. Our study included not just elite leagues in Turkey, but clubs with more limited finances

in the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> leagues, and was designed to better reflect the general situation and allow comparisons across leagues of different statuses. There is still no law requiring the presence of an AED in arenas in Turkey. However, this topic came to the agenda in 2016, and the related official process was begun.

The present study included professional clubs and is the first study to assess the status of the different leagues compared with professional clubs in Turkey. There are clear differences in medical preparedness related to club status. To more effectively ensure the safety of players on the field, cardiovascular safety programs, the presence of an AED, a MAP for emergencies and CPR training should be mandatory for all professional clubs.

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