An internship experience researching sudden death in young athletes and gaining exposure to clinical cardiology

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In summer 2012 I had the opportunity to work as a research intern at the Minneapolis Heart Institute Foundation (MHIF). MHIF is a nonprofit organization with the mission of improving cardiovascular health through research and education. The internship they offer is an effective extension of this mission: future physicians (the interns) are educated about healthcare through a collection of diverse experiences, and in return the interns work with physicians to advance clinical research projects. The internship program at MHIF is primarily designed for pre-medical students in the latter stages of undergraduate education (juniors, seniors, and graduated students). In existence since 2002, the program has three main purposes for participating interns: to gain experience with clinical research, to learn more about cardiovascular healthcare, and to develop an accurate understanding of medicine as a career (Willenbring et al., 2008).

Clinical research

The most valuable part of the internship was gaining exposure to clinical research. I was assigned to work under Dr. Barry J. Maron, who holds a special interest in researching sudden death in athletes. In 1993, Dr. Maron brought the National Registry of Sudden Death in Young Athletes to MHIF. The Registry is an autopsy-based database that records athlete deaths meeting five criteria: the athlete must have been related to the USA in some capacity, such as an American athlete or a foreign athlete on American soil; a victim of sports-related sudden death; under the age of forty; working towards improvement and excellence in their sport; and they must have died in 1980 or later (Maron et al., 2009). The database currently holds about 2300 cases of athlete deaths, and an additional 225 cases of “aborted death,” which is defined as a sudden cardiac arrest that would have resulted in death if not for cardiopulmonary resuscitation (CPR) or automated external defibrillator (AED) use. Since there is no mandatory reporting of athlete deaths in the USA, the Registry is responsible for many statistics on the issue of sudden athlete deaths and is therefore an important resource for physicians, administrators, and public health officials.

The most recent statistical analysis of the Registry was published in 2009, and this analysis is still considered accurate (the percentages do not change much over time). This analysis offers many useful figures concerning the demographics of sudden death in athletes. For example, the most recent years of the database suggest a sudden death incidence rate in athletes of 99 deaths per year (Maron et al., 2009). The age of these athletes at death was