

# **PE2067/L: Improve data on young people affected by conditions causing Sudden Cardiac Death**

## **Consulate General of Italy in Edinburgh written submission, 13 March 2025**

The following briefing provides an overview about the mandatory screening programme for all young people involved in organised sport in Italy, the legislation and protocols in place, and a review of the most recent studies analysing the impact of the screening and its cost-effectiveness.

The briefing is based on the proceedings of a scientific symposium organised on 28<sup>th</sup> January 2025 by the Embassy of Italy in London, in collaboration with the Italian Society for Sport Medicine (FMSI), as part of the initiatives comprised in the *Memorandum of Understanding* signed by the Italian and the British governments in April 2023.

Based on the evidence that approximately two thirds of Sudden Cardiac Deaths (SCDs) in young athletes happen during competition or training and an additional 13% of SCDs are linked to sport-related activities, and that the incidence rate of SCD victims was significantly higher among young athletes compared to the general population, in the late 70s/early 80s Italian sport medicine physicians made recommendations to the Italian Parliament to introduce relevant legislation to prevent SCDs.

Italian legislation (Decree of the Minister of Health, 18<sup>th</sup> February 1982 for professional and competitive athletes; last, Decree of the Minister of Health, 24<sup>th</sup> April 2013 for non-competitive athletes) mandates that every participant engaged in sports activities must undergo a clinical evaluation and obtain an eligibility certificate. This certificate is reviewed at least every year.

Accordingly, a nationwide systematic screening program was launched in Italy in 1982. The screening protocol can be carried out exclusively by a physician specialised in Sport Medicine. The same guidelines for sports medicine define as “young competitive athletes” adolescents and young adults aged 12 to 35 years who participate in an organized sports program that required regular training and competition.

Each sport federation part of the Italian National Olympic Committee (CONI) defines the age at which screening becomes mandatory from (e.g. from 8 years of age for swimming athletes; from 12 years of age for rugby players, etc...) and any specific examination to guarantee the athlete's health protection. In general terms, the protocol includes: athlete anamnesis (family history, previous personal health history); anthropometric measurements (weight, height); visual acuity examination; urine analysis; resting and stress 12-lead electrocardiogram (EKG); spirometry. Further examinations (physical examination for particular organ districts specifically involved) may be included in the protocol for different sport disciplines and, therefore, the certificate is specific for a particular sport.

Additional tests are requested only for those athletes who had positive findings during the first screening and following this second screening, the athlete can be

certified qualified for sport activities, temporarily disqualified, or permanently disqualified.

The major result of the introduction of this mandatory screening is the significant decrease of SCDs among young athletes. Indeed, a study carried out on the population of the Veneto region (north-east of Italy) between 1979 (prior the introduction of the mandatory screening) and 2004 shows an 89% decrease in the incidence rate of SCDs among young competitive athletes aged 12 to 35 years (from 3.6 in every 100,000 people/year in 1979 to 0.4 in every 100,000 people/year in 2004).

Remarkably, the incidence rate result obtained among the athletes is even lower than the one obtained in non-athletes, where the SCD incidence rate is 0.7/0.8 in every 100,000 people/year, unchanged over the last decades.

The decrease of SCDs incidence rate is accompanied by the concomitant increase of the proportion of young competitive athletes who were identified and hence disqualified from competition because of cardiomyopathies during the same interval. Indeed, on average, only a bit more than 90% of the athletes are cleared for competition after a normal first-line evaluation. After the second-line evaluation, 2% of the athletes were diagnosed with a disease, with 0.3% temporarily disqualified and 0.3% permanently disqualified.

Notably, despite the screening being mainly focused on the cardiovascular system performance, 74% of the athletes are diagnosed with disease pertaining to the heart or the vascular systems; the remaining 26% relate to pneumology, allergology, neurology, or oncology fields.

Therefore, the screening has a particular relevance in the early diagnosis of a major disease, in finding possible risk factors or minor diseases, and in being a first preventive screening for the population.

It has been determined that the mean cost on the Italian Health System per athlete for the first-line evaluation screening is €64 (approximately £54), with additional €15 (approximately £13) when including additional investigations. The sport medical examination is officially recognised by the Health System: it is provided free of charge to minors and to people with disabilities, while all other people can access it by contributing €36.15 (approximately £30) towards its cost.

### **Relevant bibliography:**

1. Decree of the Italian Ministry of Health, February 18, 1982. Norme per la tutela sanitaria dell'attività sportiva agonistica [*Rules concerning the medical protection of athletic activity*]. Gazzetta Ufficiale della Repubblica Italiana. March 5, 1982:63.
2. Decree of the Italian Ministry of Health, April 24, 2013. Disciplina della certificazione dell'attività sportiva non agonistica e amatoriale e linee guida sulla dotazione e l'utilizzo di defibrillatori semiautomatici e di eventuali altri dispositivi salvavita. [*Rules concerning non-athletic and leisure sport activities certification, and guidelines on the installation and use of defibrillators and other life-saving devices*]. Gazzetta Ufficiale della Repubblica Italiana. July 20, 2013:169.

3. Corrado D, Basso C, Pavei A, Michieli P, Schiavon M, Thiene G. Trends in sudden cardiovascular death in young competitive athletes after implementation of a preparticipation screening program. *JAMA*. 2006 Oct 4;296(13):1593-601. doi: 10.1001/jama.296.13.1593. PMID: 17018804.
4. Vessella T, Zorzi A, Merlo L, Pegoraro C, Giorgiano F, Trevisanato M, Viel M, Formentini P, Corrado D, Sarto P. The Italian preparticipation evaluation programme: diagnostic yield, rate of disqualification and cost analysis. *Br J Sports Med*. 2020 Feb;54(4):231-237. doi: 10.1136/bjsports-2018-100293. Epub 2019 Jul 17. PMID: 31315826; PMCID: PMC7029244.