



The journal *Cardiovascular and Metabolic Science* and the material contained therein are under the Creative Commons Attribution-NonCommercial-NoDerivatives (CC BY-NC-ND) license.



**Keywords:**

cardio-protected area,  
teaching, medical  
school.

**Palabras clave:**

espacio  
cardioprotegido,  
enseñanza, escuela de  
medicina.

## Cardio-protected areas are a paradox of teaching in medical schools

### *Los espacios cardioprotegidos son una paradoja de la enseñanza en las escuelas de medicina*

Jorge Álvarez de la Cadena-Sillas,\* Enrique Asensio-Lafuente†

**Abbreviations:**

AED = Automatic external defibrillator  
CPA = Cardio-protected areas  
CPR = Cardiopulmonary resuscitation  
OHCA = Out-of-hospital cardiac arrest  
SCD = Sudden cardiac death

*The highest kind of man is he  
who acts before he speaks and  
professes what he practices.*  
Confucius

The primary purpose of medical schools is to train health professionals with the skills, knowledge, and attitudes necessary to prevent, preserve, restore, and promote health in individuals, families, and communities through prevention, diagnosis, treatment, and rehabilitation of health disorders. In addition, it also seeks to train university students with solid scientific, ethical, and humanistic foundations. Those foundations will enable students to adapt to all the changes that occur and will occur in the field of health. They will also encourage students to contribute to advancing medical knowledge in their field and the community. The social responsibility of medical schools is a growing philosophical concept that is beginning to permeate the field and requires rethinking their mission in society and how they can contribute to its development.<sup>1</sup>

On the other hand, sudden cardiac death (SCD) is a world health problem that represents

around 30% of the total cardiovascular mortality, and nearly 20% of all deaths in adults. The one-year survival rate for an out-of-hospital cardiac arrest (OHCA) is around 8 to 10%. Interventions such as early initiation of cardiopulmonary resuscitation (CPR) by laypersons and use of an automatic external defibrillator (AED) may increase the survival rate.<sup>2</sup> Based on this, the concept of cardio-protected areas (CPA) should be considered in public and private places with high traffic, as well as specific establishments where a rapid response is required for cardiac emergencies. This includes airports, shopping centers, stadiums, schools, universities, and public buildings, among others.

SCD is a global health problem, and Mexico is not an exception. Several challenges persist in improving survival rates, including the implementation of public policies, the provision of generalized CPR training across all educational levels, from elementary to professional, and the enactment of laws that foster the establishment of CPAs.<sup>3</sup> All medical schools, when teaching the concept of CPR and SCD, have the social, scientific, ethical, and human obligation to be CPA, as well as to promote the free teaching of CPR to the general population. From a university's social responsibility standpoint, cardiopulmonary resuscitation teaching should be regarded with the same relevance as support of vaccination campaigns, promotion of timely cervical and breast cancer detection and prevention, and other public health issues that are addressed in academic institutions.

\* Cardiologist.

Instituto de Corazón de Querétaro.

Práctica privada en San Miguel Allende, Guanajuato, México.

† Cardiologist-Electrophysiologist.

Instituto de Corazón de Querétaro, México.

**How to cite:** Álvarez de la Cadena-Sillas J, Asensio-Lafuente E. Cardio-protected areas are a paradox of teaching in medical schools. *Cardiovasc Metab Sci*. 2025; 36 (3): 142-143. <https://dx.doi.org/10.35366/121367>

There are approximately 105 medical schools in Mexico. However, only a few have managed to be CPA, for example: UNAM, the University of Colima, the University Center for Health Sciences of the University of Guadalajara, the University of Guanajuato, the Autonomous University of Morelos, and the Autonomous University of Nuevo León.

The inevitable question arises: why aren't they all? Quoting Dr. Albert Einstein: *«Teaching by example is not a way of educating; it is the only way!»*

It is also important to showcase that universities are a representation of society. It might be thought that their main population is young, healthy people. However, there are many other actors from different social strata with different risk factors that might be the subject of an OHCA or other cardiac emergencies, or any other emergency, for instance. Although a medical school campus is not a hospital, it should be prepared to diagnose an emergency, administer first aid, and activate the emergency medical system.

It's worth clarifying that the mere presence of an AED does not make a CPA. What does a CPA entail? In summary:<sup>4,5</sup>

1. Easy and fast access to AEDs: placed at strategic, easily accessible, and marked locations.
2. Staff training: staff and students are provided with CPR and AED training.
3. Maintenance: a plan is established for the maintenance and monitoring of equipment, ensuring its proper functioning.
4. Action plan: developed to respond to a cardiac emergency, including the activation of emergency services, start CPR, and use of an AED, and ensure prehospital and hospital emergency cardiac care.

Returning to our initial thoughts: if we consider that promoting community health and adapting to the changes that the community itself requires are some of the main opportunity areas for medical schools, are not these principles perfectly applicable to the creation of CPA and the teaching of CPR in our country? We call on Mexican universities, and especially medical schools and faculties, to transform their campuses into CPA, thereby promoting and disseminating their social commitment to help reduce the scourge of SCD that affects us so much.

Those who have the mission to teach great things are equally obligated to practice them. (Saint Gregory the Great).

## REFERENCES

1. Alfonso-Roca MT, García-Barbero M. La responsabilidad social de las facultades de medicina. Una exigencia inaplazable para adaptarse a las necesidades de la población. *Educación Médica*. 2021; 22 (2): 99-105.
2. Álvarez de la Cadena-Sillas J, Asensio-LE, Martínez-Dunker D, Urzúa-Gonzalez A et al. Out of hospital cardiac arrest, first steps to know and follow in Mexico to have cardioprotected territories. A point of view of a group of experts. *Arch Cardiol Mex*. 2024; 94 (2): 174-180.
3. Álvarez de la Cadena-Sillas J. The lack of CPR teaching in Mexico. *Cardiovasc Metabol Sci*. 2024; 35 (1): 4-5.
4. Urzúa-González A, Álvarez de la Cadena-Sillas J, Martínez-Dunker D et al. Suggested protocol for certification as a cardio-protected area in Mexico. Positioning of a group of experts. *Cardiovasc Metabol Sci*. 2024; 35 (1): 31-36.
5. Martínez-DD Urzúa-G A, Aguilera-ML, Laínez-ZJ, Álvarez de la Cadena-SJ et al. Espacios cardioprottegidos en México: acciones para prevenir la Muerte súbita cardíaca. Una postura de profesionales de la salud. *Salud Pública Mex*. 2023; 65 (4): 407-415.

**Conflict of interest:** the authors declare that they have no conflicts of interest.

## Correspondence:

**Dr. Jorge Álvarez de la Cadena Sillas**

**E-mail:** jalvarezdelacadena@gmail.com