

# Lessons learned from Planning and Conducting a National Cardiology Congress for Medical Students.

## Planificación, Desarrollo y Dirección de un Congreso Nacional de Cardiología para Estudiantes de Medicina. ¿Qué se puede aprender?

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**Abstract:** Some singularities of the medical degree program might alter the development of new training and teaching activities that involve the active participation of undergraduate students. As a result of the initial experience in conducting the first edition of a national congress for medical students in Francisco de Vitoria University (Madrid, Spain), the difficulties encountered during its planning and direction are detailed. The solutions adopted are presented with the aim of facilitating the organization of future similar events.

**Keywords:** medicine, cardiology, university, investigation, congress.

**Resumen:** Algunas de las singularidades que presenta el plan de formación del grado en Medicina podrían alterar los planes de desarrollo de nuevas actividades formativas y docentes que impliquen la participación activa de los alumnos de pregrado. Fruto de la experiencia inicial en la organización de la primera edición de un congreso nacional para estudiantes de Medicina en la Universidad Francisco de Vitoria (Madrid, España), se detallan algunas de las dificultades encontradas durante su planificación y dirección, exponiéndose las soluciones tomadas, en un intento de facilitar futuras nuevas convocatorias de eventos similares.

**Palabras clave:** medicina, cardiología, universidad, investigación, congreso.

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### 1. Introduction

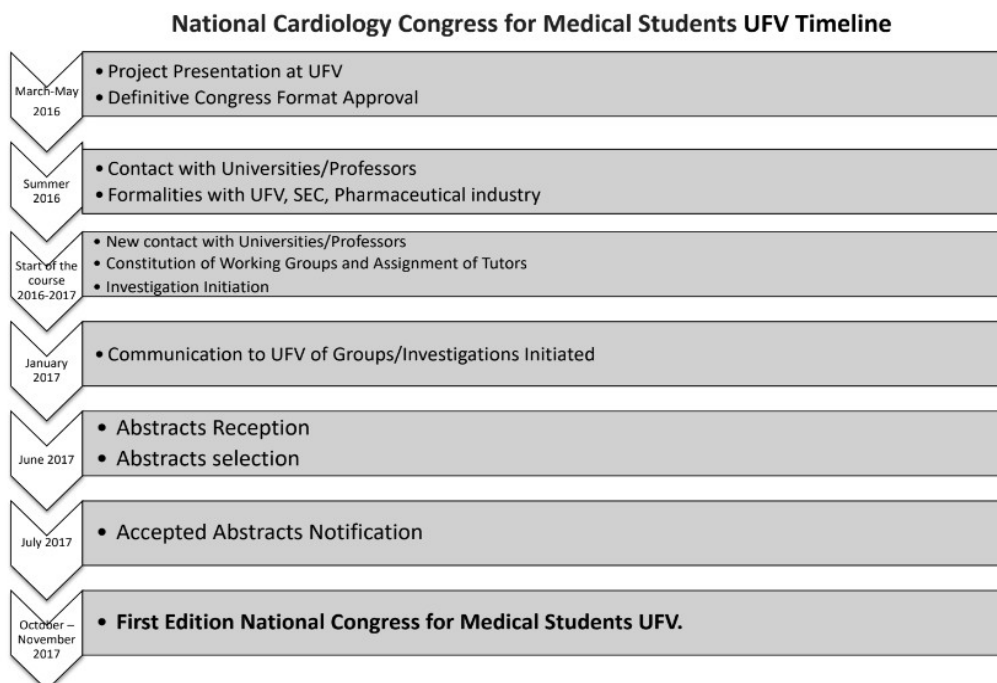
Undergraduate studies, and in particular the Medicine career, present some peculiarities that can hinder the development of new initiatives or projects. Thus, the extensive study plan of the degree in Medicine, made up of 360 ECTS (European Credit Transfer and Accumulation System) spread over 6 years, with its intense theoretical-practical teaching load that implies compulsory daily face-to-face attendance both at theoretical classes and at practical activities and/or clinical rotations, added to the increasingly high degree of specialization of Medicine in recent years, could constitute barriers for the active participation of the student in new medical research activities and/or extracurricular training.

In November 2017, the first edition of a national cardiology congress for medical students took place in Madrid, with the participation of more than 400 students from different Spanish universities. As a result of this experience, a second international edition was convened in October 2020, which had to be postponed due to COVID (<https://www.congreso-cardiologia-ufv.com>).

Based on personal experiences during the organization of that first edition, and in the absence of literature that exposes the handling of some of the incidents that occurred during it, this article has been prepared that summarizes the steps and methodology used for the preparation, planning, publicity and search for financing of the congress, as well as the personal learning derived from those challenges that the organization and direction of activities aimed at undergraduate students may present. This work aims to help the organizers of future calls for similar teaching or research projects in this group of students.

**Planning.**

Taking as a reference and example the success of a cardiology congress for students (CARES) that has been held at the University of Salamanca for years (1), a schedule (Figure 1) and a draft of the congress program were presented to the Vice Dean of Research and Medical Education of the Faculty of Medicine of the Francisco de Vitoria University (UFV), an academic institution where the first two authors work as professors of the cardiology subject.



**Figure 1.** Initial schedule of the National Congress of Cardiology for Medical Students. SEC: Spanish Society of Cardiology; UFV: Francisco de Vitoria University.

From that first meeting, the total willingness to host, finance and give all the necessary support for the celebration of the congress was obtained from the UFV. Taking that schedule and basic draft, the work plan was started. Several modifications were made to these in the successive face-to-face meetings with the representatives of the faculty, until a provisional program was formed with some objectives (Table 1), deadlines and a target group of students, which later for various reasons had to be modified and expanded. The main mission was to provide students with opportunities to start actively in the world of research, an aspect that seems highly valued by this group (2).

The priority of the first months of preparation was to have all the necessary infographics ready for the start of the 2016/17 academic year to publicize the congress among medical students and cardiology professors and tutors. In addition, the search for external funding was simultaneously initiated, and the Spanish Society of Cardiology (SEC) and the hospitals where the co-directors worked were contacted to seek their scientific support.

**Table1:** Objectives of the National Congress for Medical Students.**In the academic year prior to the congress:**

- Devise and develop a supervised research project in cardiology.
- Synthesize your results into a structured abstract for critical appraisal by conference reviewers.

**During the congress and after it:**

- Review the basic concepts of the cardiology subject.
- Defend in public, in oral or poster format, the results of the works accepted and carried out in the previous year.
- Participate actively in the development of a scientific congress.
- Know and value the importance of the basic rules of scientific presentations (eg: adaptation to format, schedules, clothing, etc.)
- Attempt to continue the line of research initiated, also considering sending it for publication in scientific journals.

During the 2016/17 academic year, this publicity was continued and maintained through different means and channels, basing it fundamentally on an explanatory leaflet (Supplementary Material I) and a poster that were sent by post and email to the different faculties of medicine, hospitals university students, professors and medical students with whom the different organizers had contact. A congress web page was set up (<http://www.ufv.es/congreso-de-cardiologia> -currently not operational-) where the information was updated and from where the registration of the students and the subsequent sending of the documents was allowed. research papers or clinical cases.

However, at the end of the 2016/17 academic year, the number of registered students did not reach 80 and only 4 abstracts had been received for evaluation. Therefore, at the beginning of the 2017/18 academic year, efforts were redoubled, once again contacting universities, professors and students, requesting the help of UFV students themselves who, through social networks and their associations, collaborated greatly way to ensure that at the end of October 2017 the inscriptions had to be closed due to exceeding the capacity of the assembly hall itself (450 people) where the congress was going to be held and that the reception of works was completed after being sent 25 communications that were selected for oral presentation.

The congress was developed in a format of four sessions, of two hours each, focused on four major chapters of cardiology (heart failure, arrhythmias, familial heart disease and ischemic heart disease), which were held over two consecutive days (Friday afternoon and Saturday morning) in which the congress was divided. Each one of the sessions was introduced by a brief presentation (<30 minutes) given by four renowned cardiologists who are experts in the field. After that, the period for presenting papers (6-7/session) was opened by the students, who had 10 minutes to summarize the most relevant aspects of their research or clinical case, and then a period of another 5 minutes began. in which the rest of the students and the teachers in charge of each session began a round of questions and clarifications about the work presented (Supplementary Material II).

**Adaptations.**

Regarding the initial conception of the congress, several revisions and modifications had to be made during its preparation. Among the most striking, it would be worth highlighting the following:

- Thinking of a greater scientific use of the congress (3), the congress was initially addressed to medical students who had already acquired knowledge of biostatistics, bibliographic search and who had begun the regulated study of the cardiology subject, that is, from fourth grade onwards. However, given the difficulties in attracting a significant number of students from these courses, and even more so, given the interest shown by students from the initial medical courses, it was opened to any medical student regardless of the year of study. career in which it was found, and the participation of a small number of students from other biomedical careers (nursing and physiotherapy) who requested it was even authorized.

- Originally, one of the main objectives of the congress (Table 1) was to encourage students to develop a supervised research project in the field of cardiology during the previous year, which would later be synthesized and presented during the congress. However, based on the usual difficulties expressed by the students(3-5) to achieve this tutoring or to find the necessary tools and time for the formation of work teams, it was finally decided to also allow the sending of clinical cases that allowed a brief review of some cardiovascular pathology, which facilitated the availability of at least 6 student communications in each of the 4 sessions in which the congress was divided.

- In the same way, although an attempt was made to rigorously continue the initial schedule (Figure 1), due to the delay of the students in confirming their interest and participation, the registration and communication deadlines had to be extended to a few weeks. prior to the actual celebration of the congress. This meant an extra effort for the organization, since the program, order of presentations and other relevant aspects (capacity, documentation, etc.) could not be definitively closed until a few days before the edition.

### **Learning from experience.**

After the completion of this 1st edition, it is possible to share some reflections that led to rethinking the organization of the 2nd edition, and that have probably contributed to better planning and coordination, consistently facilitating considerable work during the months prior to that second call. It should be noted that, unfortunately, due to the SARS-CoV-2 coronavirus pandemic that began in early 2020 and the desire to maintain the face-to-face nature of the edition in order to achieve several of the initial objectives of the congress, for the time being has had to postpone the celebration of this.

Although it is considered that the organization of an event of these characteristics requires and justifies a planning of months of evolution as the one followed for its correct execution, it is very likely that in the case of undergraduate students these long periods, which cover several academic courses, may cause a certain lack of motivation, disinterest or simply forgetfulness, as seems to be shown by the low initial interest in registering and sending works, which, however, increased exponentially as we approached the date of its celebration .

It is also very likely that the current planning of the medical career, where in many faculties the student carries out clinical practices through multiple brief and continuous rotations between various hospital services, makes it difficult to meet and formalize relationships of tutoring or mentoring of resident doctors. or adjuncts with the students themselves, which possibly limited the possibility of carrying out real research work in the field of cardiology during this university stage in a majority of our students. In fact, it is known that despite the motivation that many of our students have to start research projects, lack of time and the belief that the potential tutor lacks interest are among the

most common barriers pointed out by students for their participation(4). In our case, this lower participation in research projects could be solved with the opening of the congress to the sending of clinical cases, which facilitated a basic bibliographical review of some essential aspects of various cardiovascular pathologies, an aspect that was of great interest to many of us. congress participants as listeners.

Another major obstacle encountered in organizing this event aimed at undergraduate students was its financing. In this first edition it was supported practically in its entirety by the UFV, without whose support it would have been impossible to organize and celebrate the congress. For our part, an unsuccessful attempt was made to imitate the organizational model of other medical congresses, requesting the collaboration of various pharmaceutical, medical device or health management companies. Due to their own policies and ethical codes of these companies, direct funds were not authorized for the celebration of the congress. For the second edition, and like other similar congresses (6), the idea of financing by the pharmaceutical industry has been abandoned, and the search for companies oriented to the sports world and academic teaching (academies MIR exam preparation). In this way, it probably also contributes to the medical student reflecting from his first years of career on how the relationship between his profession and the pharmaceutical industry should be (7).

Regarding the publicity of the congress, although the organizers re-evaluated and modified various diptychs and brochures for its dissemination, and repeated attempts were made to contact students and teachers by more classic means (formal letters of invitation, emails, etc.), The best and most productive publicity came from the hands of the students themselves, who were able to attract their classmates much more quickly and closely through their most usual channels of communication (social networks) and their own associations. sometimes even developing their own graphics and logos.

Likewise, in order to achieve greater and more diverse participation, one of the measures that contributed to recruiting a greater number of students from other universities was to include speakers from other university centers among the speakers, who, through their academic functions in their Universities themselves attracted a significant number of students and papers to the congress.

Finally, another aspect that surely also contributed to greater attendance, and that was highly valued and appreciated by the students, was the accreditation granted by the UFV with 1 ECTS credit.

## Conclusions

- It is believed that it has been shown that, with adequate support and support, it is feasible to transform an idea into an undergraduate university education project with great reception and support.
- However, its development shows that it is necessary to make adaptations of the initial plans to current social realities, especially in areas such as time planning, financing and advertising.

**Supplemental material:** anexo I (díptic of the Congress) and anexo II (definitive program).

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**Author contributions:** J. Ruiz-García wrote the initial text. E. Alegría-Barrero and D. Monge Martin reviewed and finalized the writing of the final version of the text. All the authors participated in the conference planning meetings and were part of the direction of the first edition of it.

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