

## Editor's page

Continuing Medical Education: A Priority in *Revista Española de Cardiología*

## Formación médica continuada: un objetivo prioritario en REVISTA ESPAÑOLA DE CARDIOLOGÍA

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## INTRODUCTION

Therapeutic and diagnostic procedures and management protocols for all human diseases change at a vertiginous rate and consequently the education acquired in medical schools fails to equip physicians for daily clinical practice, thus obliging them to update their knowledge and skills throughout their working lives. The set of training activities that contribute to keeping physicians' competencies and skills up-to-date is known as continuing medical education (CME).

The design of contents and their quality is essential to guarantee the success of training initiatives. The Core Curriculum for the General Cardiologist, first published by the European Society of Cardiology (ESC) in 2006 and constantly updated,<sup>1</sup> serves as a model for CME contents for European cardiologists. The European Board for Accreditation in Cardiology (EBAC) provides international accreditation for continuing education activities by allocating credits to a CME program after it has been assessed by a board of experts. By awarding accreditation, the EBAC certifies that the scientific content of a CME activity is of high quality, free of commercial bias,<sup>2</sup> and has an appropriate didactic approach. The increasing weight of CME in our environment is shown by the tendency in some countries to require physicians to gain CME credits as a condition for their continued right to practice medicine.<sup>3</sup>

## BIOMEDICAL JOURNALS AND CONTINUING MEDICAL EDUCATION

Biomedical journals are an exceptional repository of high-quality resources for CME and their teaching potential is multiplied when allied with the new technologies, which allow physicians to individually tailor their CME needs. To guarantee the quality of CME activities channeled through articles in scientific journals, the EBAC has established the following specific criteria: *a)* the authors must have international reputations; *b)* conflicts of interest must be disclosed, *c)* there must be no advertising in the article; *d)* there must be an object assessment tool (a multiple-choice question-

naire), and *e)* physicians must be able to obtain CME credits through the web if they respond correctly to 60% of questions or more.

Among cardiology journals, a notable example is the ESC National Societies Cardiovascular Editors' Network. One of the priorities of this network is to promote postgraduate education through journals belonging to the group. Thus, the "Almanac" initiative was started in 2011, consisting of the publication of a series of educational articles that *Heart*, a journal with unquestionable CME credentials, shares with other journals within the network with a view to disseminating scientific knowledge.<sup>4</sup> Throughout the history of *Revista Española de Cardiología* (Rev Esp Cardiol), all its Editorial Boards have assigned major importance to CME, as reflected year by year in the publication of distinct "Update" series, translation to Spanish of the most important abstracts of clinical trials presented at the main English-speaking meetings, translation to Spanish of the ESC clinical practice guidelines, and the organization of a course given by *Casa del Corazón* on "The scientific article: from author to reader". Fully aware of the importance of CME, the current editorial board has tried to take CME a step further; taking advantage of the redesign of the website and new technologies, we have introduced the following new sections to increase access to training among both generalist and specialist physicians: "Focus on", "Editor's Videos", and our most recent initiative "ECG Contest".

## CONTINUING MEDICAL EDUCATION IN REVISTA ESPAÑOLA DE CARDIOLOGÍA

## "Update"

Continuing education has traditionally been of major importance to the journal, as reflected in one of its traditional sections, "Update", which has been published for more than 25 years (Table 1). The journal has traditionally used this section to provide readers with access to the opinions and points of view of acknowledged experts in the various fields of cardiovascular disease. The editors of Rev Esp Cardiol can state with pride that authors who have accepted to write these monographs include world experts in these fields. These series are accredited by the Commission for Continuing Education of Health Professionals in Spain and by the Spanish Society of Cardiology through its

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**Table 1**  
“Update” Series Published in *Revista Española de Cardiología*

Title	Year
Ischemic heart disease	1988–1989
Valvular heart disease	1990–1991
Chronic heart failure	1991–1992
Heart arrhythmias	1993
Pharmacology	1994
Cardiomyopathy	1995–1996
Research methods in clinical cardiology	1996–1997
Pathology of the heart of noncardiac origin	1997–1998
Sudden death	1999–2000
Genetics and molecular biology in cardiology	2001
Diabetes and cardiovascular disease	2002
Clinical decision-making based on cardiac diagnostic imaging techniques	2003
Advances in the management of heart failure	2004
Myocardial revascularization	2005
Cardiovascular disease in women	2006
Noncoronary arterial disease	2007
Cardiovascular prevention	2008
Cardiovascular translational medicine	2009
The right heart and pulmonary circulation	2010
Systemic diseases and the cardiovascular system	2011
Arrhythmias	2012
Innovation in cardiology	2013
Acute coronary syndromes	2014

Continuing Education Program. After the publication of these “Update” series readers can access the accreditation test for a limited time through the journal's website.

Since its inception in 1988 with a supplement on ischemic heart disease, this section has covered various areas of cardiovascular disease with highly topical series of clinical importance, which have aimed to meet the training needs of our readers (Table 2). Specifically, the first “Update” selected by the current editorial board and appearing under the title of “Systemic diseases and the heart”, covered a series of topics that were not strictly cardiovascular but were highly relevant to cardiologists.<sup>5</sup> The reasons for selecting these topics can be summarized as follows: a) cardiologists currently treat high-complexity patients, due to their greater number of comorbidities<sup>6</sup>; b) cardiologists generally attend older patients,<sup>7</sup> implying a high prevalence of noncardiological, as well as cardiological comorbidities; c) society demands that the medical profession keep “fighting” for patients with other severe diseases, increasing demand for cardiological care; d) cardiologists need to interact with specialists in other disciplines to coordinate the treatment of complex patients, and e) both the treatment and management of persons with noncardiac diseases change rapidly, requiring cardiologists to be well versed in any changes that might affect the cardiovascular system.

The next series, which aroused strong interest in our readers, centered on arrhythmias,<sup>8</sup> a discipline that, like many others within cardiology, has been completely revolutionized in the last few years. Specifically, major advances have been made in the last 30 years, such as catheter ablation techniques<sup>9,10</sup> and the development of implantable cardioverter-defibrillators,<sup>11</sup> which are true highlights of modern medicine and have turned arrhythmology into a well-defined subspecialty of cardiology deserving its own unit in cardiology departments. The aim of this series was to provide interested clinical cardiologists, residents in cardiology, and specialists in internal and family medicine with the

molecular, anatomical and electrophysiological foundations required to understand the mechanisms of arrhythmias and learn how to diagnose them and provide appropriate treatment.

The 2013 “Update” series was devoted to innovation in cardiology.<sup>12</sup> Cardiology has always been at the forefront of technological innovation and, especially in the last few years, the introduction of new technological tools has opened the door to a revolution in both diagnosis and treatment. The various articles in this series discussed the burning issues that will continue to change cardiology, and, befittingly, these articles were written by internationally renowned authors who were highly experienced in widely diverse topics, such as the future of imaging techniques, telemedicine and the new electrocardiographic monitoring systems, personalized medicine, genetic diagnosis, cardiac tissue engineering, neo-organogenesis, and biological diagnosis through metabolomics and proteomics. In interventional cardiology, the articles centered on renal denervation in hypertension, coronary stent implantation in coronary disease, and percutaneous mitral repair in mitral regurgitation.

Finally, this year's “Update” series focussed on the most influential or controversial issues in acute coronary syndromes,<sup>13</sup> such as their epidemiology, the role of imaging techniques in evaluating post-infarction function and scarring, the value of nontroponin biomarkers and their potential applications, and the limitations of regional primary coronary angioplasty programs.

### “Focus on”

Continuing the journal's mission to help readers keep up-to-date and pursue professional development, in 2011 we detected the need to devote more space to educational articles. This gave rise to the annual “Focus on” section, consisting of a short series of review articles on timely topics (Table 3).

We began this section with a topic that was extremely well received by our readers: advances in statistical methods.<sup>14</sup> The aim of this short series was to familiarize cardiologists with the new statistical methods that have replaced or complemented traditional statistical methods and the articles discussed issues concerning new prediction models and their evaluation, competing risks analysis, and meta-analyses.

With the effects of the economic crisis only too evident, the following year seemed an appropriate moment to devote the section to healthcare management. The 2012 “Focus on” series published articles on such hot topics as the challenges facing the health system<sup>15</sup> and strategic planning in health care organizations and their evaluation,<sup>16,17</sup> while a special article was devoted to public-private collaboration.<sup>18</sup>

In 2013, the series focussed on the epidemiology of cardiovascular disease in Spain in the last 20 years. Currently, this disease provokes high mortality rates, with enormous repercussions on the population and a strong economic impact on society. This series provides an up-to-date review on the epidemiological data of 4 cardiovascular diseases that, for distinct reasons (generally their high prevalence), have a major impact on the health of the Spanish population: ischemic heart disease,<sup>19</sup> heart failure,<sup>20</sup> atrial fibrillation,<sup>21</sup> and infectious endocarditis.<sup>22</sup> The first article in this series<sup>19</sup> is currently REC's most widely cited article written by Spanish authors in 2013.

As a new departure, this year we have published the 4 articles of the “Focus on” series in the same issue. The series is devoted to promoting cardiovascular health,<sup>23–26</sup> which we believe has increased the visibility and cohesion of the topic. We also believed the topic to be especially timely, given that cardiovascular diseases are currently a public health problem of the first magnitude. The rise in the prevalence of cardiovascular diseases in the last few

**Table 2**  
Topics and Authors of Recent “Update” Series Published in *Revista Española de Cardiología*

<i>Systemic diseases and the cardiovascular system (2011)</i>	
Systemic diseases and the cardiovascular system: introduction	Leopoldo Pérez de Isla, Pablo Avanzas, Antoni Bayes-Genis, Juan Sanchis, and Magda Heras
Obesity and the heart	Francisco López-Jiménez and Mery Cortés-Bergoderi
The endocrine system and the heart: a review	Soo S. Rhee and Elizabeth N. Pearce
Neurology and cardiology: points of contact	Larry B. Goldstein and Nada El Hussein
Chemotherapy and the heart	Juan C. Plana
Retinal vascular signs: a window to the heart?	Gerald Liew and Jie Jin Wang
Hematologic diseases: from within the heart	Weixian Xu, Tracy Y. Wang, and Richard C. Becker
Cardiovascular disease in the elderly	Charles F. Jackson and Nanette K. Wenger
Cardiovascular disorders and rheumatic disease	Alexandra Villa-Forte and Brian F. Mandell
Psychiatric and behavioral aspects of cardiovascular disease: epidemiology, mechanisms, and treatment	Patrick J. Smith and James A. Blumenthal
The heart during pregnancy	Michael E. Hall, Eric M. George, and Joey P. Granger
Assessment of renal function, iatrogenic hyperkalemia and acute renal dysfunction in cardiology. Contrast-induced nephropathy	José Luis Górriz Teruel and Sandra Beltrán Catalán
<i>Arrhythmias (2012)</i>	
Arrhythmias: introduction	Antoni Bayes-Genis, Pablo Avanzas, Magda Heras, Leopoldo Pérez de Isla, and Juan Sanchis
How to establish an arrhythmia unit in the 21st century	Karl-Heinz Kuck, Erik Wissner, and Andreas Metzner
Mechanisms of cardiac arrhythmias	Larraitz Gaztañaga, Francis E. Marchlinski, and Brian P. Betensky
Genetics and arrhythmias: diagnostic and prognostic applications	Nicola Monteforte, Carlo Napolitano, and Silvia G. Priori
Clinical approach to atrial tachycardia and atrial flutter from an understanding of the mechanisms. Electrophysiology based on anatomy	Francisco García-Cosío, Agustín Pastor Fuentes, and Ambrosio Núñez Angulo
Paroxysmal supraventricular tachycardias and preexcitation síndrome	Jesús Almendral, Eduardo Castellanos, and Mercedes Ortiz
Atrial fibrillation ablation	Carlo Pappone and Vincenzo Santinelli
Bradyarrhythmias and conduction block	Julia Vogler, Günter Breithardt, and Lars Eckardt
Syncope	Ángel Moya-i-Mitjans, Nuria Rivas-Gándara, Axel Sarrias-Mercè, Jordi Pérez-Rodón, and Ivo Roca-Luque
Cardiac resynchronization therapy. Indications and contraindications	Marta Acena, François Regoli, and Angelo Auricchio
Ventricular tachycardia in coronary artery disease	Begoña Benito and Mark E. Josephson
Sudden death	Antonio Bayés de Luna and Roberto Elosua
<i>Innovation in cardiology (2013)</i>	
Innovation in cardiology: introduction	Pablo Avanzas, Antoni Bayes-Genis, Leopoldo Pérez de Isla, Juan Sanchis, and Magda Heras
Imagining the future of diagnostic imaging	Leticia Fernández-Friera, Ana García-Álvarez, and Borja Ibáñez
Telecardiology: past, present and future	Jacob Thorsted Sørensen, Peter Clemmensen, and Maria Sejersten
Personalized medicine: genetic diagnosis for inherited cardiomyopathies/channelopathies	Michael J. Ackerman, Cherisse A. Marcou, and David J. Tester
Cardiac tissue engineering and the bioartificial heart	Carolina Gálvez-Montón, Cristina Prat-Vidal, Santiago Roura, Carolina Soler-Botija, and Antoni Bayes-Genis
Progress in treatment by percutaneous coronary intervention: the stent of the future	Takashi Muramatsu, Yoshinobu Onuma, Yao-Jun Zhang, Christos V. Bourantas, Alexander Kharlamov, Roberto Diletti, Vasim Farooq, Bill D. Gogas, Scot Garg, Hector M. García-García, Yukio Ozaki, and Patrick W. Serruys
Advances in percutaneous treatment of mitral regurgitation	Luis Nombela-Franco, Marina Urena, Henrique Barbosa Ribeiro, and Josep Rodés-Cabau
Proteomics and metabolomics for mechanistic insights and biomarker discovery in cardiovascular disease	Javier Barallobre-Barreiro, Yuen-Li Chung, and Manuel Mayr
New treatment for old disease: management of resistant hypertension by percutaneous renal sympathetic denervation	Takashi Kanai and Henry Krum
<i>Acute coronary syndromes (2014)</i>	
Acute coronary syndromes. New diagnostic strategies and treatment	Juan Sanchis, Pablo Avanzas, Antoni Bayes-Genis, Leopoldo Pérez de Isla, and Magda Heras
The epidemiology of coronary heart disease	Ignacio Ferreira-González
Invasive treatment of non-ST-segment elevation acute coronary syndrome: cardiac catheterization/revascularization for all?	Eva Swahn and Joakim Alfredsson
Complementary, alternative, and putative nontroponin biomarkers of acute coronary syndrome: new resources for future risk assessment calculators	Ronald W. Millard and Michael Tranter
Protection against myocardial ischemia-reperfusion injury in clinical practice	David Garcia-Dorado, Antonio Rodríguez-Sinovas, Marisol Ruiz-Meana, and Javier Inserte

**Table 2** (Continued)Topics and Authors of Recent “Update” Series Published in *Revista Española de Cardiología*

Personalized antiplatelet therapy	Paul A. Gurbel, Rahil Rafeedheen, and Udaya S. Tantry
Treatment of acute coronary syndromes in the elderly and in patients with comorbidities	Stefano Savonitto, Nuccia Morici, and Stefano De Servi
Weaknesses in regional primary coronary angioplasty programs: is there still a role for a pharmaco-invasive approach?	Nicolas Danchin, Nelson Dos Santos Teixeira and Etienne Puymirat
Imaging techniques in the evaluation of post-infarction function and scar	Eduardo Pozo and Javier Sanz
Secondary prevention strategies for acute coronary syndrome	Juan Quiles and Beatriz Miralles Vicedo

years, together with the projected mortality for the coming decades, serve as an irrefutable argument supporting the urgent need for well-planned interventions to control the cardiovascular diseases pandemic, especially in the poorest countries.<sup>27,28</sup> In the years to come, we will endeavor to continue to meet our reader's educational needs with short update series such as these.

### Clinical practice guidelines of the European Society of Cardiology translated to Spanish

Since 2004, Rev Esp Cardiol has published Spanish translations of the ESC clinical practice guidelines, which are highly valued by our readers as an aid to their clinical practice. We are currently in the process of translating the recently published guidelines coinciding with the European Congress of Cardiology (Barcelona, 2014) on noncardiac surgery,<sup>29</sup> hypertrophic cardiomyopathy,<sup>30</sup> pulmonary embolism,<sup>31</sup> myocardial revascularization,<sup>32</sup> and aortic diseases.<sup>33</sup> Importantly, since 2011 and at the express wish of the Spanish Society of Cardiology, each guideline is published in Rev Esp Cardiol with an article written by a task force of Spanish cardiologists on its practical application in the local setting, the real

management of each disease in the distinct healthcare settings, the availability of the measures recommended, and the cost-benefit ratio.<sup>34</sup> As an example of the wide acceptance of these comments among our readers, we only have to mention that Rev Esp Cardiol second most-frequently cited article by Spanish authors published in 2013 is the comments on the ESC clinical practice guideline on the management of acute myocardial infarction in patients with ST-segment elevation<sup>35</sup>; as previously mentioned, the most widely cited article is the “Focus on” the epidemiology of acute coronary syndromes in Spain.<sup>19</sup>

### Abstracts presented at the main international cardiology meetings

For several years, the abstracts presented at the annual meetings of the American Heart Association, the American College of Cardiology and the ESC have been published in print form in the shortest time possible. Nevertheless, Rev Esp Cardiol has taken advantage of the immediacy of its website, which was renovated in 2012, and since March of that year has uploaded Spanish translations of these abstracts to its blog.<sup>36</sup> The week

**Table 3**Topics and Authors of the “Focus on” Series Published in *Revista Española de Cardiología*

<i>Contemporary methods in biostatistics (2011)</i>	
New statistical methods in cardiovascular research	Juan Sanchis, Pablo Avanzas, Antoni Bayes-Genis, Leopoldo Pérez de Isla, and Magda Heras Heras
Regression modeling strategies	Eduardo Núñez, Ewout W. Steyerberg, and Julio Núñez
An introduction to competing risks analysis	Melania Pintilie
Systematic reviews and meta-analysis: scientific rationale and interpretation	Ignacio Ferreira González, Gerard Urrútia, and Pablo Alonso-Coello
Performance measures for prediction models and markers: evaluation of predictions and classifications	Ewout W. Steyerberg, Ben Van Calster, and Michael J. Pencina
Propensity score methods for creating covariate balance in observational studies	Cassandra W. Pattanayak, Donald B. Rubin, and Elizabeth R. Zell
<i>Health care management (2012)</i>	
New context and old challenges in the health care system	Manel Peiró and Joan Barrubés
Strategic planning in health care organizations	Francisco de Paula Rodríguez Perera and Manel Peiró
The creation of innovation through public-private collaboration	Marc Esteve, Tamyko Ysa, and Francisco Longo
The balanced scorecard as a management tool for assessing and monitoring strategy implementation in health care organizations	Josep Bisbe and Joan Barrubés
<i>Focus on: Epidemiology of cardiovascular disease in Spain over the past 20 years (2013)</i>	
Epidemiology of acute coronary syndromes in Spain: estimation of the number of cases and trends from 2005 to 2049	Irene R. Dégano, Roberto Elosua, and Jaume Marrugat
Epidemiology of atrial fibrillation in Spain in the past 20 years	Julián Pérez-Villacastín, Nicasio Pérez Castellano, and Javier Moreno Planas
Epidemiology of heart failure in Spain over the last 20 years	Inés Sayago-Silva, Fernando García-López and Javier Segovia-Cubero
Epidemiology of infective endocarditis in Spain in the last 20 years	Nuria Fernández-Hidalgo and Pilar Tornos Mas
<i>Focus on: Promoting cardiovascular health (2014)</i>	
Promoting cardiovascular health worldwide: strategies, challenges, and opportunities	José M. Castellano, Jagat Narula, Javier Castillo, and Valentín Fuster
Promotion of cardiovascular health and three stages of life: never too soon, never too late	José M. Castellano, José L. Peñalvo, Sameer Bansilal, and Valentín Fuster
Nutrition and cardiovascular health	Silvia Berciano and José M. Ordovás
Physical exercise and health	Alberto Cordero, M. Dolores Masiá and Enrique Galve



before the meeting, an e-mail message is sent to all readers with a list of abstracts and dates. The abstracts are then translated by the editors and posted on the blog under their corresponding heading, including a link to the original slides presented at the meeting, in case they are available. At the end of the meeting, a second e-mail is sent to readers with direct links to each abstract. Thus, Spanish-speaking readers unfamiliar with English can gain fast and easy access to all this information, which is subsequently published in article form in a regular issue of the journal.

### “Editor’s Videos”

As previously discussed in the journal,<sup>37</sup> since 2013 we have posted a video of an interview with the author of an original article picked by the editor in each issue. These highly directed interviews are conducted by one of the editors, with the aim of sending a clear message to viewers on the study hypothesis, methods, results, and clinical implications of the study. Given the current digital explosion, we believe that video can give a major boost to auditory and visual learning.

### “ECG Contest”

As part of our drive to innovate in CME and interact with our readers, an initiative called “ECG Contest” was launched in 2014.<sup>38</sup> This is a new monthly section that publishes an electrocardiogram along with a short clinical history but no diagnosis. Readers are encouraged to send a response. When presenting these cases, we have collaborated with different sections of the Spanish Society of Cardiology to ensure that the material represents the distinct perspectives of cardiology subspecialties. The answer to each case is published the following month, giving sufficient time to start a debate that gathers momentum through the Rev Esp Cardiol blog and Twitter. The idea is to disseminate knowledge of electrocardiography among our readers. This type of article has enjoyed great success in other national and international scientific journals; in addition to being a breath of fresh air in biomedical journals, it is an interactive tool with high didactic value.

### CONCLUSIONS

Continuing medical education is a priority among scientific societies and inevitably plays a major strategic role in Rev Esp Cardiol. Having consolidated the “Update” and “Clinical practice guidelines” sections as the core features of our educational aims, we have managed to make other CME content rapidly available, such as the translation of abstracts presented at meetings. We have also set up new initiatives such as the “Focus on”, “Editor’s Videos” and, more recently, the “ECG Contest”, which have been well received by our readers, as reflected by the number of hits to our website.

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### CONFLICTS OF INTEREST

None declared.

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