

Electronic Manuscript Management at *Revista Española de Cardiología*: New Tools for Old Objectives

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«*They always say time changes things, but you actually have to change them yourself.*»

Andy Warhol (1928-1987)

Since their first introduction in the 1990s, *Revista Española de Cardiología* (REC) has tried to take maximum advantage of information technology (IT) tools in order to improve the quality and dissemination of the journal. Accordingly, REC was a pioneer among publications in our field in offering free, full-text, electronic content fully 10 years ago. Years later, it is striking to find that this initiative should have been taken up by a wide-ranging scientific movement known as Open Access and come to be accepted almost as a “basic right” of the international scientific community.

Some years later, REC incorporated its electronic version in English, also in free access format. Although it is impossible to quantify exactly to what extent, there can be no doubt that these editorial strategies have had a huge impact on the excellent evolution of REC's bibliometric indices.¹⁻³

Last February, continuing on the same path, REC put into action its on-line electronic manuscript management system (EMM). Currently, almost all manuscripts submitted for publication are sent using the EMM system available at www.revespcardiol.org. While this tool goes unnoticed by readers of the contents of REC, undoubtedly from an editorial point of view, introducing EMM has meant one of the greatest transformations in the internal work processes of REC since publication began more than 50 years ago.

To almost completely abandon the use of paper means a highly complex transformation in the working practices of authors, reviewers, editors, and publishers, so taking this step demands greater justification than simply to imitate the way in which other prestigious international

journals in the field function. Moreover, certain characteristics intrinsic to REC entail the EMM system being specially adapted to our context. The objective of the present “Editor's Page” is to review the singular characteristics of the EMM system as it has been adapted to suit REC. In addition, we discuss aspects of the peer-review process currently under debate in relation to the need to implement EMM. This is especially relevant given that, despite its relatively short operational life, some of these aspects (eg, conducting a double-blind review process) have already been identified as the cause of most of the difficulties authors encounter when interacting with the system.

Why an EMM System at REC?

While to the onlooker, it may seem as simple as acquiring a software license and getting down to work, a project on this scale implies considering highly complex strategic, logistic, technical, training, economic, and legal issues. Such a great effort can only be considered beneficial if the expected, tangible results improve REC, especially when the general bibliometric tendency is hugely positive.

As we have already demonstrated on several occasions, the REC editorial team believes growth opportunities for REC are linked to its capacity to internationalize both our readers and our authors.^{3,4} In recent years, the impact factor has placed REC within the second quartile of scientific journals dedicated to cardiovascular research (all published in English) and in a position substantially above other Spanish-language biomedical publications. Therefore, currently, authors who decide to send the results of their research projects to REC frequently do so after assessing the feasibility of their being accepted by other international English-language journals. To facilitate the reception of international articles by adopting an EMM system similar to those used by other journals among our new competitors was the principal challenge of the project. In this context, Latin-American authors also see submitting their work to REC has been simplified, given that from their countries, sending work by post or courier can be dissuasive.

A priori, it is difficult to calibrate the impact of an EMM system on the number of manuscripts received.

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To do so, we undertook a prospective study including an analysis of the market and of information provided by systems suppliers; we interviewed editors of other international cardiovascular journals and conducted a detailed review of the limited documentation available on the subject.⁵⁻⁸ The final conclusion of this research was that the response to introducing the system was quite unpredictable but that a near to 20% increase in the number of manuscripts received in the first year was to be expected.⁹ Moreover, most editors consulted recognized that article quality did not diminish.⁶ While it is still early to know our own results, in the 6 months since the EMM system became operative, the number of articles received has increased significantly by comparison with the same semester of 2006.

This increase in articles received entails a substantial work overload for reviewers, many of whom have had to make the change to performing their role in English. Internationalizing authors calls for an internationalization of reviewers. And this objective also makes the use of an EMM system indispensable.

The second, main objective of introducing EMM was to optimize productivity and internal efficiency in the peer-review process and thus shorten the time lapse between authors' finishing their manuscripts and receiving the final editorial decision.^{2,3} In a highly competitive field, this time lapse can prove definitive when it comes to choosing one publication or another. Other fundamental objectives of the project include eliminating the risk of losing articles, cutting out postage costs and reducing the "mechanical" tasks that fall to the journal office.

Freeing up these resources through technological innovation might benefit other highly expensive aspects of the editorial process at REC helping us to increase international distribution or offset costs of the free English-language edition. However, several editorial teams warned us that implementing EMM does not reduce the journal office workload but, rather, redirects this towards tasks that enhance the value of the publication.

For reviewers, the use of EMM also improves working practices by, among other features, providing immediate reception of documents, limiting full access to articles until agreement to submit a review has been received, incorporating search engines and disassociating manuscript review from physical presence at a specific geographical location.

The Singular Nature of the REC EMM System

Choosing which EMM system to use was without doubt the aspect that required most effort on the part of the REC editors. Some relatively singular characteristics of REC prove especially complex to adapt to commercially-available EMM system specifications. Firstly, Sociedad Española de Cardiología's ownership of data had to be completely guaranteed as our peer-review process is totally independent of the publishing

company. Moreover, our objective of encouraging international contributions obliges us to make available to authors and reviewers a system that is, if not entirely, at least partially bilingual, in the spaces dedicated to authors and reviewers. And, finally, the system had to be adaptable to permit REC's current double-blind manuscript review process. When finally selecting the EMM system for REC, the editors set 3 criteria for choosing in a market of at least 10 suppliers, offering a similar service: accredited experience with the system and widespread use of it in the field of medical publications; portability of the information in the system should the contract be rescinded; and the possibility of incorporating bilingual information into the author and reviewer interfaces.

After a full market study, the REC editors selected Editorial Manager – Elsevier Editorial System (EES) as our EMM system. Currently the system, both as configured for the journals published by Elsevier and in the identical version commercialized directly by Aries Systems Corporation (Editorial Manager), is used by more than 2400 scientific publications.¹⁰ All use a single version of the program. Moreover, in the last 4 years the system has been functioning 99.99% of the time. The availability of a single platform hosted both directly by the company that developed it and by Elsevier, as well as the possibility of exporting all the information to XML standard, guarantees the long-term continuity of the system, with minimal changes in the interface for authors, editors and reviewers. And, finally, since version 4.0 the EES has incorporated the flexibility of editing all correspondence and text in HTML for most of the web pages in the system, especially the author and reviewer interfaces.

On this basis, on behalf of REC and Sociedad Española de Cardiología we adopted a pioneering agreement in the history of scientific editing in Spanish and became the first scientific publication in our language to adopt an international EMM system. The system is hosted in hardware (redundant servers distributed on different continents) belonging to Elsevier International and the company is responsible for managing and administering the system, updating versions of the software tool (through a generic contract with the developers at Aries System Corporation) and providing initial training support for the editors. The intellectual property of the contents and ownership of the databases introduced into the system in the phase prior to acceptance for publication remain with Sociedad Española de Cardiología.

For months, the REC editors have tried to adapt EES as far as possible to the abovementioned singular characteristics of our journal. All HTML content in the web author and reviewer interfaces has been translated and incorporated in a bilingual English-Spanish format. Unfortunately, some interface headers are coded in the nucleus of the program and their translation equivalents cannot be added.

Ideally, we would prefer to have 2 identical interfaces available in English and in Spanish and to enable users to change from one to the other through a simple system option. However, this is currently impossible but the IT developers are working on this option for future versions.

During the initial phases of system use, the errors and dysfunctions typical of any newly-introduced electronic system are likely to occur. At this stage, we welcome any interaction on the part of system users, both authors and reviewers, and encourage readers to submit any impressions that may help improve the way the system functions.

At REC, we have established a one-year transition period to introduce the system. Accordingly, from February 2008 we will cease to accept articles submitted for publication (and reviews) on paper.

REC, Double-Blind Peer Review, and the EMM System

Most international cardiovascular journals conduct a single-blind review of articles submitted for publication and authors' names remain open to reviewers. However, REC policy is to employ double-blind peer review of manuscripts. Moreover, reviewers do not know authors' names.

For some time, both strategies have been the subject of debate among international journal editors. Some authors propose open review with direct communication between authors and peers, which might even be public on the internet.¹¹⁻¹³ Although we recognize each system has advantages and disadvantages, REC prefers reviews be masked, relying on an Editorial Committee and a panel of collaborators, necessarily limited to members of the Spanish-speaking community, the vast majority of whom are Spanish, who frequently share common spaces in the network of collaborative research.

A priori, in manuscript review, the common ground shared by authors and reviewers makes potential conflicts of interest and both favorable and unfavorable biases, more likely.

Our specific wish to maintain a masked peer-review process entails adapting EMM to suit our policy and the need for authors to bear this in mind when preparing manuscripts for submission via EES. We must insist on this particular characteristic of REC as it is by far the most frequent source of author error in the preparation of electronic submissions. Unlike other publications, REC requires that the cover page be uploaded to the system in a document separate from the rest of the manuscript so that in the final document in pdf format, the cover page is visible to editors but hidden from reviewers. Moreover, authors continue to be responsible for guaranteeing that neither their names nor their institutional affiliations are recognizable in the text of the article.

Nor has REC promoted the idea that authors can recommend specific reviewers for their articles. The use of reviewers proposed by authors is a policy present in several publications in cardiovascular research although the performance of this policy is under debate.^{14,15} Implementing an EMM system such as the latest version of EES may make it easy for REC to explore this type of initiative in the future.

How REC Manages Your Manuscript

The process of submitting a manuscript begins when the corresponding author introduces the metadata into the system (basically title, authors, affiliation and summary) after uploading the source documents that contain: *a)* the manuscript cover page; *b)* the text, with Tables and Figure headings; and *c)* the Figures.

At REC and Elsevier, we have developed specific Spanish- and English-language manuals to guide authors step-by-step in the use of EES. They are available at: http://ees.elsevier.com/eeshelp/EES_Tutorial_author.pdf and http://epsupport.elsevier.com/ees_tutorials/EES_Author_Tutorial.html, respectively.

Moreover, the REC journal office provides authors with telephone support on request.

Once an author completes the submission process by EES, the Journal Office receives notification and a Handling Editor checks document form and content. In the process, the adaptation to the norms of publication for each article type is scrupulously reviewed and details are stored in the system database. Quite frequently, articles have to be formatted again because the pdf has not been created correctly. In general, this occurs because the first page has not been adequately separated from the rest of the manuscript. If the defects are only of format, the process takes place in-house, but if errors require substantial modifications to the content of the article, authors are notified so they can approve the final document. The most frequent author errors when uploading articles are summarized in Table 1.

Once the document has been revised and corrected, the article is assigned to an Associate Editor who immediately initiates the peer-review process and assigns 2 reviewers who are specialists in the area of the manuscript and a consultant on methodology and statistics for original articles when relevant.

When reviews are complete, the editor receives notification and proposes an editorial decision to the Editor-in-Chief. Once that editorial decision has been taken, authors are notified that the article has been accepted or rejected, or that a revision cycle has been suggested. As in the great majority of scientific journals, REC recommends authors do submit revised versions of articles whenever the editorial decision allows for this.^{16,17} However, we would like to take the opportunity to remind

authors to clearly identify in the text of the new manuscript the changes made.

Aspects of Specific Concern to Reviewers

The greatest differences in the work of REC reviewers brought about by using EES is that the invitation to review an article is made electronically and that they cannot access the full text of that article until they send their acceptance to carry out the review. In these first months of operating with EES, we have found a higher proportion of authors decline to undertake reviews than when invitations were sent by post. This is paradoxical as we have not modified the time period in which we ask reviewers to send their responses and with EMM the review can be made from any part of the world where you have an internet connection.

Probably, the EMM system places less psychological pressure on reviewers who can decline to review an article by selecting an option in an electronic mailbox packed with tasks pending, than does sending a manuscript back to the journal office by return of post. While this may reduce the occasional delays caused by waiting for reviews that finally never arrive, we also have to consider how it harms the general functioning of the Editorial Committee and the overload on REC collaborators, one of whom will finally carry out the work the initial reviewer turned down. Undoubtedly, on exceptional occasions, a specific reviewer may be overloaded, but it is indispensable to remember that the reviewers' work is one of the fundamental pillars supporting REC and that each reviewer forms part of a small, collective universe that is crucial to REC's existence. In this context, we can only ask reviewers to continue to make themselves available to the journal, fulfilling their commitments in the allocated time, as they have done in recent years.

The REC editors aim to introduce a means of recognizing reviewers' work by rewarding them. Strategies such as awarding special diplomas that recognize the work of reviewers carried out year on year or even the concession of credits are approaches already used by other publications and will soon be implemented at REC.

Furthermore, EES offers other tools aimed to facilitate reviewers' work. Bibliographies appear in the form of hyperlinks in the electronic document so reviewers have direct access to the summaries of those articles cited that have been indexed. Moreover, reviewers can directly search the system for earlier, similar articles and publications by the authors using the SCOPUS database (directly available via the system) from the moment they agree to undertake the review.

Initial interaction with the system for all REC reviewers should begin with the completion of their personal data, specifically in relation to topics and research areas of interest on which they want to conduct reviews. We would stress that these areas of interest are freely open to reviewers who can modify them as often as they wish.

TABLE 1. Most Frequent Errors Found in Interaction With EES in *Revista Española de Cardiología*

Authors	<ul style="list-style-type: none"> Uploading the first page of the manuscript together with the main document and not as a separate item Not respecting the structure of each manuscript type in terms of order of text, references, figure headings, and tables Submitting figures in an electronic format that does not offer the resolution quality indicated by the system Exceeding the word limit for each manuscript type
Reviewers	<ul style="list-style-type: none"> Not finalizing review submission by confirming receipt of the e-mail message of thanks Confusing the spaces reserved for reviewers and those for authors

We take this opportunity to invite all REC Editorial Committee members, as well as those collaborators who have conducted previous manuscript review work, to involve themselves in this first interaction with the system, even though they may not yet have received an invitation to review via EES.

Once you are ready to submit a review, the system reserves separate spaces for comments addressed to the editors and those addressed to the authors. It is usually easiest to write comments in a word processor program and then copy and paste them into the system. It is very important to highlight the fact that reviews are not available to the journal office until they are electronically submitted and the reviewer has acknowledged receipt of an automatically generated e-mail message thanking them for their work.

Also, at REC and Elsevier, we have compiled Spanish- and English-language manuals to guide reviewers in their interaction with EES located in the reviewers' space on the system and available at http://ees.elsevier.com/ees-help/EES_Tutorial_revisor.pdf and http://epsupport.elsevier.com/ees_tutorials/EES_Reviewer_Tutorial.html, respectively.

Conclusions

To sum up, REC has set out on a new path with the introduction of EMM. In the coming months, the system will also be configured for use in inviting manuscripts and for REC Supplements. To take advantage of the latest developments in IT that increase REC's efficiency is one of the permanent challenges facing the editors. This measure should be interpreted in the context of an overall strategy, initiated some years ago, aimed at promoting the internationalization, dissemination and quality of our publication. The indicators obtained in recent years confirm we are on the right path, and in this sense, we

can but recall the saying: “the more things change, the more they are the same.” Let’s hope that’s the case.

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REFERENCES

1. Alfonso F, Bermejo J, Segovia J. Impactología, impactitis, impactoterapia. *Rev Esp Cardiol.* 2005;58:1239-45.
2. Alfonso F, Bermejo J, Segovia J. *Revista Española de Cardiología* 2005: actividad y reconocimiento científico. *Rev Esp Cardiol.* 2005;58:1482-7.
3. Alfonso F, Segovia J, Heras M, Bermejo J. *Revista Española de Cardiología* 2006. Actividad, difusión e impacto científico. *Rev Esp Cardiol.* 2006;59:1339-44.
4. Alfonso F, Segovia J, Heras M, Bermejo J. Publicación de ensayos clínicos en revistas científicas: consideraciones editoriales. *Rev Esp Cardiol.* 2006;59:1206-14.
5. Peters J. The hundred years war started today: an exploration of electronic peer review [cited Sep 2007]. *J Electronic Publishing.* 1996;1:1-2. Available from: <http://hdl.handle.net/2027/spo.3336451.0001.117>
6. Beebe L, Meyers B. Digital workflow: managing the process electronically [cited Sep 2007]. *J Electronic Publishing.* 2000;5:4. Available from: <http://www.press.umich.edu/jep/05-04/sheridan.html>
7. Meyers B. Peer review software: has it made a mark on the world of scholarly journals? [cited Sep 2007]. Available from: <http://www.editorialmanager.com/homepage/resources/peerreview.pdf>
8. Roberts P. Scholarly publishing, peer review and the internet [cited Sep 2007]. Available from: http://www.firstmonday.dk/issues/issue4_4/proberts/index.html#author
9. Shapiro K. Bibliography and Summary: Electronic Peer Review Management. A report prepared by Kam Shapiro for the Scholarly Publishing Office [cited Sep 2007]. Available from: <http://spo.umdl.umich.edu/monthly/peerreview.html>
10. Aries Systems. Journals using our workflow solutions [cited Sep 2007]. Available from: <http://www.editorialmanager.com/homepage/journals.html>
11. van Rooyen S, Godlee F, Evans S, Smith R, Black N. Effect of blinding and unmasking on the quality of peer review: a randomized trial. *JAMA.* 1998;280:234-7.
12. Brown RJ. The use of double anonymity in peer review: a decision whose time has come? *Qual Assur.* 2005;11:103-9.
13. Regehr G, Bordage G. To blind or not to blind? What authors and reviewers prefer. *Med Educ.* 2006;40:832-9.
14. Schroter S, Tite L, Hutchings A, Black N. Differences in review quality and recommendations for publication between peer reviewers suggested by authors or by editors. *JAMA.* 2006;295:314-7.
15. Wager E, Parkin EC, Tamber PS. Are reviewers suggested by authors as good as those chosen by editors? Results of a rater-blinded, retrospective study. *BMC Med.* 2006;4:13.
16. Valente S. After the critique: revise and resubmit your manuscript. *Nurse Author Ed.* 2005;15:1-3.
17. Provenzale JM, Stanley RJ. A systematic guide to reviewing a manuscript. *AJR Am J Roentgenol.* 2005;185:848-54.