The EHJ: the first years and the future

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Initial strategy

When the current editorial team took over the European Heart Journal (EHJ) at the beginning of 2009, the strategy was clear: the EHJ would be going global. Indeed, in the flat world, the day for a primarily European journal has long been over and science has become a global activity. For instance, even at the European Society of Cardiology’s (ESC) Annual Congress, Japanese researchers today submit as many abstracts as do large European countries. Similarly, many faculty members and presenters from the USA/Canada and Europe, Asia/Australia, and Africa and Europe, submitted as many abstracts as those from large European countries. Furthermore, guidelines of great importance, such as recently those on valvular heart disease, and arrhythmias, among others, or the ‘Best of the European Heart Journal’ at national meetings—such as in some instances articles about the achievements of their pioneers in cardiology. Furthermore, Editorial Board Meetings were not held only at the ESC Annual Congress, but also at the Annual Scientific Sessions of the American Heart Association and the American College of Cardiology.

Involving non-European countries

How should this goal be achieved? Initially, it was crucial to appoint deputy and associate editors from around the world. With the nomination of Bernard Gersh, an eminent cardiologist of the Mayo Clinic, as deputy editor, Brahmajee Nallamothu from Ann Arbor, Jagmeet P. Singh from Boston, Hiro Shimokawa from Sendai, Japan, Salim Yusuf from Hamilton, Canada, David Celermajer from Sidney, Australia, Evgeny Shlyathko from Russia, and Run-Lin Gao from Shanghai, China, among others, as international associate editors, this first goal could be achieved. These editors were complemented by a number of European associate editors. A network of international editors obviously was crucial for the success of the EHJ.

CardioPulse, the News Section of the EHJ which has been introduced, reported on the appointed editors and their areas of interest and expertise. Furthermore, features on different health systems as well as centres of excellence in many countries, in particular those who had recently become members or affiliated societies of the ESC were published. Finally, focus issues in Czech, Korean, Bangladeshi, Russian, and other languages were produced to reach readers not comfortable with English as a language at this point.

Importantly, a series of review articles summarizing current knowledge in different areas of cardiovascular medicine have been written by joint teams of key opinion leaders from the USA/Canada and Europe, Africa and Europe, and Asia/Australia and Europe to provide global views on recent developments and current knowledge. Finally, guidelines of great importance, such as recently those on non-cardiac surgery, have been co-ordinated with our colleagues from the American Heart Association and the American College of Cardiology.

Involving national societies

National societies are the core of cardiological practice and research, and currently the ESC is proud to have 56 such societies among its members. The EHJ thus aimed to interact closely with these constituent bodies of its society by organizing symposia, e.g. the ‘Year in Cardiology’ covering intervention, valvular heart disease, and arrhythmias, among others, or the ‘Best of the European Heart Journal’ at national meetings—with in some instances articles about the achievements of their pioneers in cardiology. Furthermore, Editorial Board Meetings were not held only at the ESC Annual Congress, but also at the Annual Scientific Sessions of the American Heart Association and the American College of Cardiology.

The ESC journal family

The EHJ started in 1980 as the sole journal of the ESC. Soon it became apparent that specialty areas were also in need of a scientific organ. On the occasion of the 30th birthday of the EHJ in 2010, the ESC counted eight journals among its members, and today 11 journals belong to the ESC journal family including the official organ of the European Society for Thoracic and Cardiovascular Surgery (Figure 1). Thus, the ESC journal family covers the entire spectrum of cardiovascular medicine and its specialties. The most recent addition, EHJ Cardiovascular Pharmacotherapy, has just launched with a first issue. An additional journal, EHJ Cardiovascular Outcome, is currently in the planning stages.

Under the present editorship, a manuscript transfer process was initiated with around 700 reviewed manuscripts offered yearly by the EHJ to specialty journals. These are manuscripts considered more suitable for experts in a specific specialty, or manuscripts which are too technical for the general cardiology readership. Eventually, ~10% of the transferred papers are published, as some authors choose to decline the option for transfer (particularly to specialty journals with a low impact factor). Some of the transferred manuscripts are rejected by the specialty editor prior to or after revision. Transferred manuscripts are more highly cited than those directly submitted to the specialty journals. In order to make the close collaboration between the EHJ and the specialty journals of the ESC journal family more visible, a series of editorials have been published.

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Guidelines for clinical practice

Medical journals should provide information as well as education. Original research is information, while review articles and practice guidelines are education for physicians in their daily work. The *EHJ* is proud to publish the increasingly influential guidelines of the ESC on a regular basis (Table 1). In 2013 and 2014 alone, the ESC's practice guidelines committee produced nine guidelines. This increasing number of guidelines reflects the enormous developments in cardiovascular medicine over time, with ongoing innovation particularly in the last few years. It became obvious that in certain fields, for example for heart failure, updates of existing guidelines are necessary at regular intervals, while in other fields, such as pericarditis or syncope, the body of evidence and hence recommendations change less frequently. As guidelines have important implications for patient care, changing levels of evidence have to be seriously considered and guidelines changed only where appropriate.

Interestingly, some guidelines are highly cited and modestly downloaded—such as those on valvular heart disease—while others—such as the Guidelines on Endocarditis—have been downloaded over 60 000 times, but rarely cited. Thus, impact and influence differ for medical journals: while the former shows its importance for scientists (information), the latter reflects their usefulness for practising physicians (education).

The best cited

The impact factor has become the primary way in which to rate medical and scientific journals. Its true value has been discussed controversially. What it truly reflects are the number of citations over a 2-year period divided by the number of published original research and review articles. Thus, it is a measure of to what degree publications of a given journal stimulate the work of their fellow scientists and hence are cited in their respective papers. With the reservations outlined by others, the impact factor does to some degree reflect scientific success. It goes without saying that the impact factor is also influenced by self-citations, and that editorial and current opinions, which do not count as articles, are not in the denominator.

Highly cited papers are of the utmost importance for journals, including the *EHJ*. The *EHJ* is proud that under the current editorship the impact factor rose from 8.9 to 14.7 over the course of 5 years (Figure 2). The most important contributors are guidelines (Table 1), but original research papers, particularly ‘FAST TRACK’ papers (Table 2), and review articles contribute as well. Furthermore, the *EHJ* is proud to be the only journal in the cardiovascular field that provides a ‘FAST TRACK’ review process where manuscripts are assessed within 1 week to first decision. Once again, at the ESC’s Annual Congress in Barcelona this year, the *EHJ* published 11 hotline presentations simultaneously online.

To expand its scope, the *EHJ*—in collaboration with the University of Oxford—started in 2013 to publish the statistics of cardiovascular disease in Europe on a yearly basis. As a consequence of the growth of the impact factor, the annual number of manuscript submissions to the *EHJ* has increased from 3053 in 2008 to a projected 3825 this year. Accordingly, the acceptance rate of manuscripts fell to < 10%. Furthermore, online usage of the *EHJ* platform and downloads of articles increased impressively.
Table 1  Guidelines for clinical practice of the European Society of Cardiology published 2012–2014\textsuperscript{11,25–36}

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<thead>
<tr>
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<td>10.1093/eurheartj/ehu284</td>
<td>2014 ESC Guidelines on diagnosis and management of hypertrophic cardiomyopathy</td>
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<td>10.1093/eurheartj/eh108</td>
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<td>Ryden, Lars</td>
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<td>Camm, John A.</td>
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from < 200 000 per month to ~500 000 per month this year. We are expecting upward of 5 million downloads of EHJ articles this year. Finally, the growing reputation of the EHJ also motivated more and more institutions to subscribe to the journal (i.e. from 3801 in 2010 to 4506 this year).

The top editors and reviewers

Scientific journals still rely on the peer review system, although some have questioned the reliability of this editorial process. However, bibliometric research suggests that peers can indeed distinguish between papers that later will be highly cited and those which will not. The precision of the peer review system is increased with an increasing number of reviewers. As a result, whenever possible, the EHJ tries to reach decisions based on three reviewers (for ‘FAST TRACKs’ commonly 4–5) and two editors in order to ensure fair and timely decisions. This is of particular importance as the acceptance rate of high impact journals has declined sharply. The EHJ currently accepts an average of 8% of all submissions.

An efficient review process depends in large part on the voluntary work of numerous reviewers who assess submitted manuscripts as to their scientific value, language, and statistics. The EHJ is most grateful to these experts and colleagues, and acknowledges the best reviewers (Figure 3) and editors (Figure 4) on a yearly basis at the Editorial Board Meetings during the Annual Congress of the ESC.

Conflict of interest

An expert’s judgement can be affected by intellectual and professional preferences, as well as by financial interests. While for centuries it was common knowledge that our favourite concepts and hypothesis, beliefs and prejudices influence our thoughts and actions, the increasing importance of pharmaceutical and device industries for research and development has resulted in new conflicts in medical science. This has to be considered as it is the mission of science to be as close to the facts as possible and as balanced in their interpretation as we can be.

The ESC has published a White Paper to communicate their position on the issue, while the EHJ adopted the recommendations of the International Society of Medical Journal Editors (ICMJE). The ICMJE distinguishes between conflicts related to the work and those outside the work. As regards the conflicts related to the work itself, the ICMJE states: ‘This section asks for information about the work that you have submitted . . . . The time frame for this reporting is that of the work itself, from the initial conception and planning to the present. The requested information is about resources that you received, either directly or indirectly . . . . to enable you to complete the work.’ This is quite clear in terms of both the time period and resources.

Then the ICMJE also considers conflicts outside the field of the manuscript. Here it states: ‘This section asks about your financial relationships with entities in the biomedical arena that could be perceived to influence, or that give the appearance of potentially influencing, what you wrote in the submitted work.’ This is much less clear and, although the ICMJE gives an example that suggests that it is mainly the field of research in the broadest sense and not necessarily other projects with the company involved, it remains an issue for both authors and editors. Indeed, the more conflicts are reported, the less it is clear which ones are really relevant to the work in question.

We should not forget that editors and reviewers may also have conflicts. Indeed, editors may be inclined to accept papers because they are ‘hot’ and generate media attention and/or because of the expected citations. The latter certainly disadvantages even excellent studies on rare diseases and small subspecialties. Also editors may experience pressures from industry that they have to withstand. Similarly, reviewers may have intellectual and financial conflicts that they should declare to allow editors to reach fair and balanced decisions.

Of note, since transparency became the mindset of our time, it is often forgotten that transparency does not provide information about the truth of findings. Indeed, as already outlined by Sir Karl Popper73 and other philosophers of science, it is the test of time, the fact that findings survive the falsification process (a truly bumpy road for many reasons74), and not the absence of conflicts that eventually prove their scientific or even societal value. Furthermore, a recent blinded trial among 269 physicians presented with abstracts that were designed to describe clinical trials of hypotensive drugs with different degrees of methodological rigour found that reporting of industry sponsorship negatively influenced their perception of the study quality and reduced their willingness to believe and act on trial findings, independently of the trial’s quality. Thus, it appears that declaration of interests also creates bias, although in another direction.

The dark side

The dark side of publishing is fraudulent science. For editors and reviewers alike, it is often difficult to determine if findings are true unless the manuscript is entirely sloppy and rejected on that basis. It is disconcerting that the number of retractions throughout the medical literature seems to increase and particularly so among high impact journals. Indeed, the EHJ also had to retract the Kyoto Heart study77 last year, and many other journals were also affected by the fraudulent trial.
<table>
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<td>Haynes, R</td>
<td>HPS2-THRIVE randomized placebo-controlled trial in 25,673 high-risk patients of ER niacin/laropiprant: trial design, pre-specified muscle and liver outcomes, and reasons for stopping study treatment</td>
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<td>Ugander, M</td>
<td>Extracellular volume imaging by magnetic resonance imaging provides insights into overt and sub-clinical myocardial pathology</td>
<td>2012</td>
<td>10.1093/eurheartj/ehr481</td>
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<td>Ussia, GP</td>
<td>Transcatheter aortic valve implantation: 3-year outcomes of self-expanding CoreValve prosthesis</td>
<td>2012</td>
<td>10.1093/eurheartj/ehr491</td>
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<td>Stefanini, GG</td>
<td>Biodegradable polymer drug-eluting stents reduce the risk of stent thrombosis at 4 years in patients undergoing percutaneous coronary intervention: a pooled analysis of individual patient data from the ISAR-TEST 3, ISAR-TEST 4, and LEADERS randomized trials</td>
<td>2012</td>
<td>10.1093/eurheartj/ehs086</td>
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<td>Lonborg, J</td>
<td>Exenatide reduces reperfusion injury in patients with ST-segment elevation myocardial infarction</td>
<td>2012</td>
<td>10.1093/eurheartj/ehr309</td>
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<td>Sarno, G</td>
<td>Lower risk of stent thrombosis and restenosis with unrestricted use of ‘new-generation’ drug-eluting stents: a report from the nationwide Swedish Coronary Angiography and Angioplasty Registry (SCAAAR)</td>
<td>2012</td>
<td>10.1093/eurheartj/ehr479</td>
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<td>Thygesen, K</td>
<td>How to use high-sensitivity cardiac troponins in acute cardiac care</td>
<td>2012</td>
<td>10.1093/eurheartj/ehs154</td>
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<td>Luscher, TF</td>
<td>Vascular effects and safety of dalceptrapib in patients with or at risk of coronary heart disease: the dal-VESEL randomized clinical trial</td>
<td>2012</td>
<td>10.1093/eurheartj/ehs019</td>
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<td>Freixa, X</td>
<td>Ischaemic postconditioning revisited: lack of effects on infarct size following primary percutaneous coronary intervention</td>
<td>2012</td>
<td>10.1093/eurheartj/ehr297</td>
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Furthermore, the EHJ was a victim of the Poldermans scandal as it had published a number of papers by the author who was dismissed by Erasmus University in 2011. As Poldermans has published numerous papers, it was initially difficult for the Investigative Committee of Academic Integrity of Erasmus University to determine their scientific integrity. Thus, to remain fair and balanced, the EHJ published an expression of concern shortly after the case became public.76

The first report of 30 September 201278 was followed by a more recent one of 24 July 2014.79 The most important study evaluated therein was the DECREASE trial published in the New England Journal of Medicine in 200980 and the 2-year follow-up in the EHJ in 2011.81 Indeed, this trial has influenced the ESC guidelines on perioperative care led by Poldermans.82 After a meta-analysis on beta-blockers in perioperative care had been published in July 2013,83 the discussion on the reliability of DECREASE-1 became more intense as its results were not in line with other studies, in particular the POISE trial.84 Thus, the ESC together with the American College of Cardiology and the American Heart Association immediately placed a statement of concern on their homepage and the Guidelines in the EHJ.85 In an editorial,86 the EHJ editors tried to analyse the situation in a prudent fashion until the new guidelines on perioperative care were to appear.

In their most recent report, the Erasmus Committee concluded: ‘On the basis of these findings, the Committee is unable to confirm or dispel doubts about neither the care with which the DECREASE-1 study was conducted – and thus about the study’s integrity – nor about the reliability of its results.’ After discussions within the ESC board and with the editors of the New England Journal of Medicine, the editors of the EHJ decided to place an editor’s note related to this paper to inform their readers appropriately. Importantly, at the same time the ESC Guidelines Committee published its new guidelines on perioperative care online during the ESC Congress in Barcelona this August.11

Figure 3 Top reviewers of the European Heart Journal 2011–2014 (From left to right: Gerd Heusch, Johann Auer, Nico van de Veire, Kurt Huber).

Figure 4 Top associate editors of the European Heart Journal 2012–2014 [From left to right: Christian M. Matter (Basic Science), Thomas F. Lüscher (editor-in-chief), Filippo Crea (Acute Coronary Syndromes), Stefano Taddei (Hypertension)].
As allegations towards other authors, doubts about scientific integrity, and other issues became more common, the EHJ editors decided to appoint an ethics review board consisting of three senior colleagues to help them to reach appropriate decisions on such issues.

Challenges of the future

The greatest challenge for any journal is to maintain and expand its scientific and educational quality. The EHJ tries to achieve that by providing an even better service to its authors and readers. Additional editorial board members and associate editors with particular expertise as well as a common reviewer database of all ESC journals with better profiling is a project currently in progress. Furthermore, novel educational products, such as interactive cardiovascular flashcards or clinical decision cases, are currently being evaluated.

Scientific and educational matters aside, other challenges lie ahead: will we still publish on paper in the near to mid-term future? The surveys among our readers showed that the young generation primarily reads online. The availability of an iPad version of the ESC journal family took this into account. Similarly, the electronic list of content mailed weekly to our readers provides better online access to the EHJ.

Furthermore, we have to consider that more and more journals will publish open access. The EHJ currently publishes ~15% of its articles open access to address these needs. Indeed, in some countries, the funding bodies require open access publishing of the results of projects funded by federal grants. True open access, however, also involves a change in the business model. While in classic peer-reviewed journals the reader (or the institutions they works in) pays; with open access, the authors pay. Whether the review process is as careful in open access journals as in the traditional journals also remains an open question, particularly as novel financial conflicts may arise for editors within this business model.

References
