Joint societies CVD Prevention Guidelines launched in May 2012

The latest CVD Prevention Guidelines emphasize changing behaviour and give more weight to population studies

The joint European Societies Guidelines on cardiovascular prevention in clinical practice were launched at EuroPRevent 2012 in May in Dublin, Ireland.

Nine societies have joined forces in a task force to produce this fifth edition of CVD Prevention Guidelines. The last document was published in 2007, and the 2012 version differs in numerous ways. First, it takes the bold step of stating that 80–90% of all cardiovascular disease (CVD) is preventable. The Guidelines then place greater emphasis on the behavioural aspects of prevention and discuss ways of making it easier for patients to change their lifestyles.

In a controversial move, taskforce chair Professor Joep Perk (Kalmar, Sweden) introduced the GRADE system for the grading of evidence in order to increase the weight given to population studies. Traditional grading systems gave studies with a double-blind cross-over design (often industry sponsored drug studies) a strong rating, but this rigorous methodology could not be used in population studies of smoking, physical activity, etc. It was believed that there was so much information in large population studies that they had to be upgraded in scientific value.

The 2007 CVD Prevention Guidelines did not contain any strict evidence-based recommendations because of conflict around not taking population studies on board. ‘It made those guidelines rather weak’, says Perk. ‘I decided to fight for taking GRADE on board’.

Using GRADE, the 2012 guidelines now have three types of recommendations: strong recommendations to do something, strong recommendations not to do something, and weak recommendations. The latter is a kind of wish list of things that could be done if the time and money are available, but they should not be top priority. Perk says: ‘It’s a more practical, pragmatic way of thinking and that’s because the document is in the first place for people working in the field’.

Another change Perk argued for was asking all parties to deliver a more concise message. This produced its own diplomatic challenges, with people asking why their particular field was now less important. He also fought for a new format based on the what, why, whom, how, and where of preventive cardiology, in an effort to make the Guidelines more accessible to readers and for the first time refers to implementation. The chapter on the ‘where’ of prevention, for example, explores implementation at different levels of health care, from nurse coordinated programmes to specialized rehabilitation and prevention centres.

Each chapter kicks off with key messages and recommendations, which are useful for all readers. The chapters conclude with the most important new information (for the knowledgeable clinician) and the remaining gaps in evidence. It’s hoped that the latter will inspire scientists to investigate these areas.

For the first time the 2012 CVD Prevention Guidelines provide recommendations for four classes of CVD risk: very high, high, moderate, and low risk. The 2007 document discussed just two levels of risk. The 2012 Guidelines highlight the fact that the number of low-risk countries in Western Europe has increased considerably over the past 2–3 decades. Three quarters of this change can be attributed to lifestyle alterations in populations (primarily less smoking, although increasing physical activity has also played a role). Just one-quarter is due to better medical treatment. At the same time, the risk of CVD is increasing in several Eastern European countries.

A number of tools are being produced to aid implementation. These will be launched at the ESC Congress in Munich, Germany, in August. The whole document will be boiled down to the essentials on one A4 sheet of paper. This could be put on the desk of every general practitioner in Europe with an interest in CVD prevention. Pocket guidelines will focus on the what, why, whom, how, and where of preventive cardiology. Slide sets will be available on the ESC website for teaching purposes at medical schools, hospital meetings, and so on. Continuing medical education (CME) questions on the field of prevention will be created to enable cardiologists to earn CME points. Finally, an implementation group will create a European toolkit.

The final chapter of the 2012 CVD Prevention Guidelines is devoted to a discussion of political activities at national and EU levels. It recognizes the fact that changing human behaviour is a political issue. ‘If we want to change behaviour we also need the political decisions’, says Perk. ‘We talk about building cities, creating surroundings where people can move around, promoting healthy food. All these things are at the level of the politicians’.

The smoking ban is an excellent example of how political decisions can help people make lifestyle changes, with resulting benefits on heart health. Doctors need to become engaged at the political level, talking to politicians and pressing them to make population decisions that create a healthier environment. It goes back to the evidence that 75% of the gains in the western world have been at the population level. The guidelines assert that doctors should continue their clinical activities but extend that to promoting healthy behaviour in populations.

Jennifer Taylor, MPhil
The growing burden of cardiovascular disease

Will the new EU research funding programme Horizon 2020 provide what is needed?

Between 1970 and 2000 novel therapies in CVD, particularly for acute coronary syndromes but also for heart failure, led to an average of 4 years increase in life expectancy, compared with <6 months gain in cancer and no change for pulmonary disease over the same time period. Despite this unmistakable progress, cardiovascular diseases (CVD) still lead the statistics for mortality. Furthermore, the number of affected persons and the impact on health expenditure in developed countries exceed those of other diseases (2008 Report on European Cardiovascular Disease statistics, http://www.ehnheart.org/cvd-statistics.html).

Overall advances in treatment, improved living conditions, lifestyle, and preventive measures have led to a dramatic increase in life expectancy in affluent countries. In Europe, the challenges of an ageing population thus dominate the health agenda (http://ec.europa.eu/health/ageing/docs/eip_strategic_plan.pdf). This includes a growing burden of chronic CVD complicated by associated diseases such as, diabetes, renal, and respiratory diseases.

To address these challenges, biomedical research is called upon to expand translation and transfer of knowledge into new treatment strategies and innovative products. Improving early disease detection and treatment may reduce the impact of the growing burden of chronic diseases. Personalized medicine, or, stratified medicine, can improve the therapeutic response by stricter definition and identification of subgroups within large populations.

A coordinated European-wide approach will be essential.

(1) There is need for solid evidence-based data to guide treatment, requiring the setting up of large-scale databases for incidence, treatment, and outcomes. This must be European-wide to address regional diversity and adapt management. Earlier successful surveys on ischaemic heart disease have demonstrated the need for such an approach.

(2) The level of specialization and expertise required to develop novel tools for diagnosis and treatment of CVD through integrated exploratory and translational research can only be obtained by transnational collaborations within the EU, as demonstrated for example, by the successful studies on mechanisms and biomarkers for atherosclerotic disease. However, for European funding to be efficient and to fully exploit the added value of the transnational approach, coordination between different agencies within the European Commission’s funding scheme has been far from optimal. For CVD, earlier survey and policy studies have been conducted under Directorate-General for Health and Consumers (DG SANCO). Currently e-health lies within Directorate General Information Society and Media (DG INFSO) which has supported very exciting research on computer-aided surgery for valvular heart disease, while collaborative research projects on mechanisms and biomarkers for disease, including e.g. valvular heart disease, are under Directorate-General for Research and Innovation (DG R&I).

In addition, input from experts in the field and from stakeholders in health research has been ad hoc and lacking in structure.

In December 2012 The European Commission released its budget proposal for the next 7 years, including research funding, http://ec.europa.eu/research/horizon2020/index_en.cfm. The new programme for research funding Horizon 2020 incorporates the Framework Program (FP), Competitiveness and Innovation Program (CIP), and the European Institute of Innovation and Technology (EIT) in a single funding scheme, with a proposed budget of €80 billion. The proposal covers the full chain of innovation from explorative research through implementation and support for industrial development. Three major priorities form the axes along which the programme is organized: excellent science, industrial leadership, and society challenges. Health and healthy ageing is defined as one of the great challenges of the EU and a specific chapter describes the overall goals for Horizon 2020 in biomedical and health care research. The programme is currently described in broad terms and principles, and is, as it should be, very ambitious. It intends to support research into the understanding of health determinants and mechanisms of disease, improving diagnosis, use of computational in silico tools for better management, prediction, implementation of better health care and proper follow-up, with better scientific tools to support policies. This programme is also reaching out into other areas such as environmental and society changes. Biomedical research will be further supported under the programme for excellence through the European Research Council (ERC) and the Marie Curie actions.

The Alliance for Biomedical Research in Europe, of which the ESC is a founding member, commented on the proposal in a position paper, http://www.biomedeurpe.eu/, and during a meeting on 24 January 2012 with members of the European Parliament, organized by Member European Parliament (MEP) Maria da Graca Carvalho, http://www.gracacarvalho.eu/en/H2020-Investing-in-strategies-in-biomedical-research-in-Europe-will-save-major-costs-in-healthcare-a3917264.htm. The scope of the programme is much appreciated as it indeed allows for a comprehensive approach, including more support for the necessary clinical research, survey and database management. However, there is serious concern that the proposed budget of €8.8 billion will be insufficient. With experience from the previous Seventh Framework Programme (FP7), which had a health budget of €6.6 billion, the programme outlined here can only be implemented with restrictions, curtailing the hopes and ambitions for better health and health care. Furthermore, under Horizon 2020, the current fragmentation in funding needs to be addressed by appropriate consultation with the experts and stakeholders. The Alliance will investigate how a European Council for Health Research could provide a
consolidated and interconnected research funding platform, for a coordinated response to the health challenges ahead and provide expert advice to drive policy-making. This will be done in consultation with all stakeholders, experts across all disciplines, and policymakers. The Biomedical Alliance will also continue its advocacy for a proper budget for health research now that the proposal is being reviewed by the European Parliament and the Council of Ministers. These actions will support the long-term goal of all biomedical societies to improve the health of European citizens.

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References

Cardiology in Greece

From its birth in 1954, Greek cardiology has been integrated with the European Society of Cardiology, while its Society predates the ACC and ESC

Greece is a small European country with a population of 11 million and a long history of medicine dating back to Hippocrates, the ‘father of medicine’ who founded the clinical study of patients, laid down basic principles of hygiene and gave us the ‘Hippocratic Oath’. The University of Athens was founded in 1837 with a Faculty of Medicine and today there are seven medical schools in seven state universities. Greece has 6 doctors per 1000 population, the highest ratio in Europe.

Cardiology in Greece

The first Greek cardiologists came from abroad in the early 1930s. Landmark historical dates are:

- 1947, first direct recording ECG, a gift from the American Professor, P. White;
- 1951, first haemodynamic laboratory established in Athens;
- 1954, cardiology recognized as an independent medical specialty;
- 1958, first chair of cardiology established in Athens University Medical School.

Cardiology specialty training requires 6 years and conforms to European standards. Many Greek cardiologists continue subspecialty training in specialized centres at home or abroad, usually the EU or USA.

Today, there are 114 cardiology departments in university, state, military, and private hospitals, in which, 715 specialist cardiologists work and 490 are trainees. There are 50 haemodynamic laboratories and, in the Athens and Thessaloniki areas primary angioplasty is available 24 h. Despite the geography (over 1000 islands, large mountain ranges), ~80% of the Greek population has access to a hospital with a haemodynamic laboratory within 3 h.

Cardiology is considered the most advanced medical specialty in the country.

Hellenic Cardiological Society (HCS)

The Society was created in September 1948 and was a founding member of the European Society of Cardiology. Its goals are the continued education of Greek cardiologists and cardiology Fellows, promoting awareness of cardiovascular disease risk factors and prevention, advocating activities directly related to clinical practice, as well as, supporting competitive cardiovascular research.
The ‘Hellenic Heart House’ the Society headquarters, is conveniently located in the centre of Athens and has recently been renovated to accommodate and expand its activities. It houses the administrative offices, is the venue for Board meetings and, has a state-of-the-art lecture hall for Working Groups’ meetings, an electronic library, dedicated space for advanced life support training and examinations, as well as providing a venue for research projects.

The Hellenic Cardiological Society (HCS) annual congress is the most important cardiology event in Greece, attended by >2500 participants. Greek leaders in cardiology as well as international authorities meet to discuss the latest developments and techniques through cutting edge lectures and panel discussions. Participants also present new research (over 500 abstracts are submitted). The 21 Working Groups of the HCS also hold an annual meeting that focuses on new developments.

In addition to these two major meetings, the HCS also organizes smaller regional meetings throughout the country. Their goal is not only to ensure the continued education of local doctors, but also to promote awareness in the community about cardiovascular disease and risk factors, to aid the public in making the right lifestyle choices for prevention.

Among the most important activities of the HCS are the Educational Seminars for cardiologists-in-training. The Seminars are held over a 2-year period and are free of charge. Through these events the HCS strives to ensure the uniform education of cardiologists. Equally important is the financial support for the new generation. Each year the HCS offers a number of scholarship and research grants to trainee cardiologists.


The Journal was launched in 1957 in Greek, but for almost 10 years now, an English edition has also been published. It is indexed in PubMed and was recently endorsed for the first time with an impact factor of 1.172.

Surveys and registries are also run through the Society. So far there are registries in PCI, acute coronary syndromes (HELIOS), and atrial fibrillation (RAFTING).

In 2010, the HCS started to organize and fund multi-centre studies on a national level. The first such study is already under way: “Study of Phospholamban Polymorphisms in Patients with Heart Failure”. The HCS also participates in pan-European projects and registries such as, the Eurohob project, Stent for Life, etc.

The Society publishes the ESC Guidelines on current important topics, and the following have already been issued:

(a) Cardiological screening of athletes.
(b) Implantable devices for the prevention of sudden death.
(c) Invasive therapy for atrial fibrillation.

Recently, the HSC translated the last 3 years compendium of ESC Guidelines into Greek and provided the volume at no cost to all members. Also published has been a contemporary ‘English-Greek Dictionary of Cardiology Terminology’.

The HCS Board has set as basic priorities the attainment of the following goals:

- Establishing itself as an official counsellor to the Greek State on all cardiology topics.
- Modern codification of cardiological medical procedures.
- Establishing specifications for the function of specialized units.
- Determination of pre-requisites for using the specialty title.
- Strengthening our Society’s relationships with Societies in other countries, especially the ESC, ACC, and AHA.

The Hellenic Cardiological Society has indeed ‘grown up’. Whereas initially there were only 28 members, today there are >2350, making it one of the largest and most active such societies in Europe.

The number of papers published by members in internationally recognized journals and those presented at major international congresses (in particular the European Congress of Cardiology), place it in the first five of the 52 National Societies that are affiliated with the ESC.

A long-term goal continues to be maintaining the greatest possible presence in the international cardiological milieu. A notable example is that a former President of the HSC, Prof. Panos Vardas, will be the next ESC President (2012—14).

Vassios N. Pyrgakis, FESC, immediate past President, Hellenic Cardiological Society.
The Leipzig Heart Center

Prof. Gerhard Schuler, Director of cardiology, discusses the institution’s history, achievements, and plans for the future with Emma Wilkinson MA

Two decades ago the land where the Leipzig Heart Center now stands was a green meadow. Reunification had just happened in Germany and there was a desperate need in the east of the country—the former German Democratic Republic—for high-quality cardiac care. Thousands of patients with heart problems were waiting for surgical interventions and invasive procedures, but there were no facilities to treat them.

To get the much needed Leipzig Heart Center and other specialist hospitals in place, the State of Saxony passed a law allowing private companies to invest in medical institutions. Step forward the Rhön stock company who applied to build and run a 350-bed cardiac hospital.

A three-way contract between the state, university and hospital placed training and research in cardiology as the responsibility of the new institution and the Leipzig Heart Center was born. University positions based within the hospital were subsequently appointed.

Gerhard Schuler

The new state-of-the-art building opened in 1994, and is now one of the biggest and most active heart centres in Europe. A major referral centre in Germany, Leipzig has >1000 members of staff and carries out an impressive tally of procedures. Figures for 2010 show 3800 open heart surgeries, 10 000 catheter laboratory procedures, 3000 coronary interventions, and 400 percutaneous valves implanted. The team also carried out 5000 electrophysiological interventions including 2500 ablations for atrial fibrillation.

The cutting edge treatment is carried out within five departments—cardiac surgery, cardiology (including electrophysiology), paediatric cardiology, anaesthesiology, and radiology.

Prof. Schuler explains that much of the research done within the cardiology department is focused on large multicentre trials. The very latest of which, a large clinical study comparing intravenous vs. intracoronary abciximab in acute myocardial infarction, has been accepted for publication in the Lancet.

Another study reaching the final stages of recruiting 600 patients is the SHOCK trial looking at the use of an intra-aortic balloon in patients with cardiogenic shock during myocardial infarction. Leipzig has much collaboration both within Europe and further afield and is also participating in SURTAVI and EXCEL multicentre trials.

When it comes to cardiac surgery, among the key topics under investigation are percutaneous valve replacement, cardiac-assist devices as well as minimally invasive mitral valve repair. The Center has a strong history of developing and trialling innovative devices.

‘Much of our work focuses on new technologies’, says Prof. Schuler. ‘And this is going to be one of the major fields in the Heart Center in years to come. Left ventricular failure is going to be one of the most frequent illnesses we see but there are not enough donor hearts available and we are going to have to resort to artificial devices’. He adds: ‘In total, 60 assist devices were implanted by my surgical colleagues in 2011 and we will be doing double that in 2012’.

Collaboration is something that comes easily to the Leipzig team, perhaps because they were able to start from scratch in a new institution, without any of the historical politics or barriers between departments, sometimes seen in other longer-standing cardiology institutions. One key example given by Prof. Schuler is, as better standards of care means those born with congenital heart disease live longer, paediatric cardiology and the general cardiology departments find themselves increasingly working together in providing on-going treatment.

The blurring of boundaries is something embraced by clinicians at Leipzig.

‘I think we are in the middle of a very exciting process right now, in particular the borders between cardiac surgery and cardiology are slowly fading away. This situation is seen with cardiac valve replacements, which require really close cooperation between cardiology and cardiac surgery’, says Schuler. ‘It has become very obvious that we are very close partners. In a few years we might
Inventory of European databases related to cardiovascular diseases

Under the auspices of the ESC the authors discuss databases for managing CVD

Despite the recent decline in cardiovascular disease (CVD) death rates in some Western European countries, CVD remains the main cause of morbidity and mortality throughout Europe, with >4.58 million deaths in 2008.1,2 On average 31% of life-years lost are caused by CVD.2 Besides the large health burden, CVD also causes a major economic burden. The direct health care costs are estimated to account for almost 10% of health care costs in the EU (€110 billion in 2006).3 About 54% of these costs can be attributed to inpatient hospital care, and 28% are due to drug use. In addition, productivity losses and informal care (i.e. the opportunity cost of unpaid care given by family members or friends) greatly contributes to the overall financial burden of CVD, amounting to—in 2006—about €41 billion and €42 billion, respectively. Hence, there is a need for ongoing improvements in CVD management. Allender et al.2 also reported on the huge regional differences in the prevalence of both cardiovascular risk factors and CVD events across European countries stressing the need for better organized CVD management.

A prerequisite to good disease management lies in the quality of the available data. Indeed, as stated in the ESC EHN (European Heart Network) white paper on “The development of a centralised cardiovascular data collection across the EU member states”, high quality data are indispensable in order for health care providers and policy makers to make appropriate decisions.3 Randomized clinical trials (RCTs) are essential in defining the treatment effect and targeting safety issues.4,5 However, due to their inclusion/exclusion criteria, strict protocol instructions and limited timeframe, RCTs lack external validity and applicability to real-life situations.4,6-8 Registries are large observational databases with the advantage of containing real-life data over an entire spectrum of patients, including higher risk patients such as the elderly, or patients with comorbidities who are often excluded from RCTs. Therefore, registries can help in the evaluation of RCT results in daily practice. They have the additional advantage that data can be collected on large number of patients within a limited time frame, especially when multiple centres cooperate, offering a comprehensive picture of variety in clinical practice. If well designed, the data allow the collection of information on prevalence, incidence, treatment, and progress of a specific disease for a representative sample. Whereas rare adverse events are sometimes not observed in trials, they are often well noticed in registries with longitudinal follow-up, making them ideal for post-marketing surveillance. In addition, registries can serve as an ideal tool to collect information on resource use and to identify treatment patterns. Therefore, they can be useful to calculate cost-of-illnesses or the costs of treatment modalities. Cost data are an important asset, given the current era, where cost-effectiveness is increasingly needed. Likewise, data on quality of life and absenteeism from work can be easily collected. Another asset of registries is their ability to identify significant differences in care, allowing benchmarking between clinicians, regions, or even countries. This would facilitate clinical practice improvements and support health policy decision-making. Finally, the immense amount of information provides additional sources of information in developing guidelines which are important for establishing the best suitable disease management strategies.

In Europe, the existing registries are highly heterogeneous, dispersed, and often unstructured. This prevents easy comparison between countries. There is a need for a centralized uniform European CVD registry, providing a solution to the dispersion and heterogeneity of data and allowing the assessment of the quality of care and patient outcomes in a more consistent manner.5
Ideally, such a centralized collection of CVD data will also make a bridge with epidemiological data, which will enrich the registries with more real-life data, in particular, on patients who are not hospitalized. Epidemiology data will give valuable information on the prevalence of disease and risk factors to list only a few.

The European Union is showing a growing interest in the centralization and standardization of health data. EU Member States are currently working on the implementation of the Directive on Cross Border Healthcare, which implies the exchange of health data from one EU country to another. A consensus needs to be found between nations on the standardization of the collected data. As a matter of fact, the current situation where most Member States have developed their own data collection systems, results in many well-known and sometimes unknown national and even regional registries, which need to be connected to each other.

The SWEDHEART registry in Sweden is a good example of how different existing registries can be merged into one new registry, allowing longitudinal follow-up of each patient included (based on a unique identification number). SWEDHEART merges four registers, respectively, on intensive care admissions (RISK-HIA), on heart surgery, on percutaneous coronary intervention and coronary angiography (SCAAR), and on secondary prevention (SEPHIA) and leads to a reduction in workload for clinicians.7

The ESC took several initiatives in order to have a general overview of the available CVD data in Europe and in individual European countries. Firstly, to coordinate the implementation of multinational registries dealing with several epidemiologically important CVD areas. Presently, six registries are ongoing and four will be implemented in 2012. Secondly, to build an inventory of the existing registries, which was initiated by a project team on “Health Economics” set-up by the Cardiovascular Round Table of the ESC. Identification of registries was organized in different ways. To start, the national Cardiology Societies associated with the ESC were asked to provide a list of registries performed in their countries. Then, a systematic search was conducted in both structured peer-reviewed databases such as Medline and through hand search in the reference list of all selected papers to complete the list. Finally, a grey literature search was done to look for missing registries. Regional, national, as well as multi-country registries were considered in the inventory. A questionnaire was sent to the registry holders to collect information on the included population, the pathologies/indications covered and the availability of clinical, health economics, and quality of life data.

The inventory provides a comprehensive overview of the databases throughout Europe, and hence to identify the gaps related to countries, diseases, and other CVD data. As a result, a web-based routinely updated dynamic portal was set up and can be consulted at http://www.esc-crt.org/workstream/Pages/dynamic-portal.aspx. The aim of this portal is to offer cardiologists, epidemiologists, policy makers, health economists, the industry, patient groups, and other stakeholders an overview of existing databases. The interactive portal is designed so that one can perform searches based on country, pathology or intervention, accessibility, resource use and quality of life. A list of registries complying with the search criteria is generated. For each registry, a brief description and the contact details of the registry holder are available.

Currently, 260 registries are included in the inventory of which 194 are accessible publicly or upon request. Totally, 252 registries contain some kind of information on resource use, e.g., information on hospitalization, medication use, lab test use, imaging techniques or medical devices. Eighty per cent contain information on the clinical diagnosis. Longitudinal follow-up data and mortality data are available in 76% of the databases. Sixty-four per cent of the databases are CVD specific, whereas the others contain CVD data but also data related to other diseases. Only 29% contain info on patient quality of life and ~50% of the databases had some kind of quality control system or audit. For most topics, only one or a few databases exist, e.g., database on arrhythmias, atrial fibrillation, pulmonary embolism, or aortic stenosis. The number of registries per country vary considerably between Member States (e.g. over 20 registries for Germany and Italy, but none for Bosnia or Albania). Additionally, few registries contained information on all topics mentioned above. In general, we found a large number of registries; however, there remain several gaps, especially in pathologies and countries covered. To tackle these issues, adequate support and sensitization can be useful, in addition to the formation of new registries and adaptation of existing registries. Ideally, a comprehensive standardized cardiovascular database, organized across countries, could be set up in order to collect data in an organized and structured manner.

This is the final goal towards which the ESC is working.

Acknowledgment

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The Journal of Interventional Cardiology

In a small field with an abundance of journals, the Journal of Interventional Cardiology is carving out its niche with articles about technologies on the horizon

The Journal of Interventional Cardiology was founded in 1988 as a combined interventional cardiology and electrophysiology journal. Prof. Gerald C. Timmis from Oakvilld University and William Beaumont School of Medicine in Royal Oak, Michigan, was the first editor. It was initially published by Futura Publishing, then Blackwell and now Wiley-Blackwell.

Today’s editor-in-chief, Dr. Cindy L. Grines, vice president of academic and clinical affairs at Detroit Medical Center, took up the post in 2005. She kept the journal’s title but changed its scope. ‘We decided to get rid of the electrophysiology component and focus only on angiography based procedures, so we’re doing coronary interventions, peripheral interventions, structural and congenital interventions’, she says.

As an interventional cardiologist herself, she knows that EP doctors and angiography interventional cardiologists have little interest in the other specialty. She wanted to attract the latter as readers so it made more sense to focus on that subject alone.

When Grines took up the helm, defining the journal’s niche was a priority. It was a challenging time, with discussions underway to launch new interventional cardiology journals in a relatively small field. Competition for articles would be high. They came up with a few areas that could distinguish them from other publications. First was to include reviews—called core curriculum—that would help cardiologists study for their board exams.

Case reports are not published in abundance and those that are accepted must be immediately useful to the operator in the cath lab. Grines explains: ‘It’s about technical nuances and complications’.

Another niche is partnering with industry so that the journal can publish articles about technologies on the horizon before they are tested in patients. She asks industry engineers who design stents and devices to write up preliminary data.

Grines also commissions research and articles from biomedical engineers. One issue for example will contain a paper by Grines about a stent complication she observed in the clinic. An accompanying article by biomedical engineers describes a bench study on the mechanics of that particular stent compared with other stents. She asked them to do the research in order to address questions about why the complication occurred. Was it a fluke? Was it related to the patient’s coronary anatomy, or was it a problem with the stent itself?

The Journal of Interventional Cardiology is published in print and electronically six times a year. Around 30% of submissions come from the USA. The remaining 70% come from a number of places including Europe, China, Turkey, Egypt, Saudi Arabia, and Australia. The journal gets few submissions from Japan. The acceptance rate is 43.8% and the impact factor is 1.4.

Grines hopes that the articles written by biomedical engineers will boost the impact factor. Unlike other journals in the field, the Journal of Interventional Cardiology is not officially attached to a society or other organization. EuroIntervention is the official journal of EuroPCR and the European Association of Percutaneous Cardiovascular Interventions and is endorsed by the European Society of Cardiology. The American Heart Association publishes Circulation: Cardiovascular Interventions, the American College of Cardiology has JACC: Cardiovascular Interventions and the Society for Cardiovascular Angiography and Interventions has Catheterization and Cardiovascular Interventions.

One idea for promoting the journal, boosting the readership and improving the impact factor is to partner up with the Cardiovascular Research Technologies (CRT) conference and TCTMD, an interventional cardiology website produced and administered by the Cardiovascular Research Foundation.

In addition to Grines as editor-in-chief, the Journal of Interventional Cardiology has section editors for the topics ACS/MI; coronary disease; congenital; core curriculum; haemostasis/thrombosis; imaging; interventional politics; management of patients, lesion and complications; new technologies; peripheral; physiology/haemodynamics; and valvular. Their responsibility is to solicit manuscripts and pick reviewers. Most are based in the USA.

The team also includes associate editors, a managing editor, editorial board, and reviewers. At the main headquarters of Wiley-Blackwell there is a publishing manager and people in charge of marketing and advertising.

The journal will continue with six issues a year but at the beginning of 2011 it increased its size by 20 pages. It has helped them to deal with a backlog of manuscripts and speed up time to publication. Discussions are underway about beginning to publish extra material online only. Another idea is to publish online case reports with moving images, and perhaps movies on how to do certain procedures. If a cardiologist wanted to learn how to use a particular stent they would have a step-by-step tutorial to teach them.

Trying to increase subscriptions ‘is a losing proposition’, says Grines. ‘Nobody really subscribes to journals any more; they just get all their information online’.

She adds: ‘Trying to stay afloat is a really big deal for us’. She was worried that the other interventional cardiology journals would put the Journal of Interventional Cardiology out of business but it still receives a healthy number of submissions and she believes it is a better product now despite the competition. ‘There’s a huge proliferation of people, companies and physicians testing things and I think that’s helped our journal with regard to the number of submissions’, she says.

Jennifer Taylor MPhil
The clinical academic pathway in New Zealand cardiology

Cardiologists Martin Stiles and Nigel Lever speak of the challenges facing clinicians in academia to Iona MacDonald

Like many other countries, New Zealand offers the choice of a clinical job paid for by the hospital, with some of the task time allocated to academic interests, or university employment, in which some of the university time is bought back by the hospital for performing clinical duties.

The most pressing challenge for Dr Stiles, an employee at Waikato Hospital with a PhD from the University of Adelaide, is to allocate sufficient time for academic research, which generally has to be outside office hours. While the conditions of employment for a university employee are less favourable (smaller salary, less annual leave entitlement), the role offers more time to pursue academic studies. New Zealand universities operate under a model of performance-based funding, in which funds are distributed based on the quality of research at an institution, creating strong pressure for researchers to publish. Consequently, much of a researcher’s time is absorbed by applying for grants. It is particularly difficult to obtain grants that cover salary and the ones that do are arguably only those awarded by the Medical Research Council and the Heart Foundation. Other sources of funding such as charities are usually more interested in funding projects rather than individuals. Notably, the budget for research funding in New Zealand is significantly smaller than what is available in Australia, Europe, and America.

Consequently, much of the research in New Zealand is accomplished with negligible resources. Dr Stiles notes that while robust competition exists between units for those resources, a high spirit of cooperation also exists, perhaps in part because of the small size of the research population. An example of this collaboration is the New Zealand Defibrillator Registry, which aims to comprehensively record each implant nationwide. Dr Stiles is involved in trans-Tasman ablation studies and is currently considering enrolment in a trans-Tasman device study. One of the current atrial fibrillation studies he is involved with has centres in Australia, New Zealand, and the UK.

As a Senior Clinical Lecturer at the University of Auckland, Dr Stiles is responsible for teaching 5th year medical students and providing attachments for 6th year students; an important and very rewarding responsibility but one that nonetheless encroaches on time needed for clinical and research duties. Similarly, finding sufficient time for clinical work is a constant challenge for Dr Lever, a clinical electrophysiologist and cardiologist at Auckland City Hospital, with university research responsibilities in collaboration with biochemical engineering. At the same time, he acknowledges that this clinical work is what drives the research.

Dr Lever considers that although New Zealand offers a wonderful opportunity to engage in cutting-edge research, various barriers make this research difficult to undertake. For instance, the government’s pharmaceutical reimbursement policy (Since 1993, PHARMAC—the New Zealand government pharmaceutical purchasing agency—has sought to minimize healthcare costs by favouring generic drugs and ‘reference pricing’ to the cheapest drug of each class, which has meant less favourable business conditions for pharmaceutical companies,) has led to the withdrawal or downsizing of pharmaceutical companies in New Zealand; there is considerable resistance to them returning and restarting their investment in clinical research, despite the fact that New Zealand can provide high-quality clinical data with robust clinical practice. Moreover, although New Zealand offers the opportunity to undertake novel research with devices, such projects are difficult to attract because of the country’s geographic isolation from international academic medical centres.

Increasingly, New Zealand’s cardiology trainees are being encouraged to undertake an academic qualification (MD, PhD) if they wish to progress in the field. The increasing importance being placed upon qualifications in New Zealand raises an important issue for Dr Lever: how can an academic role easily dovetail into a public hospital role and how can these paths be encouraged to work together? He suggests that the struggle to resolve this conflict is a problem for both the universities and the District Health Boards who employ clinical cardiovascular researchers. In contrast, the European scene encourages clinical research as an integral part of the cardiologist’s role. Both Drs Lever and Stiles agree that genuine opportunities are needed to attract New Zealand-trained specialists to return from overseas training posts, which will only happen if the public system encourages a research mentality and funds it accordingly. This will benefit patients by improving access to care and will foster improved quality of care.

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