This year the first European Society of Cardiology guidelines for the management of patients with atrial fibrillation will be published

Previous guidelines were written in conjunction with the American Heart Association and the American College of Cardiology and published in 2006. The balance of the guideline committee was heavily weighted towards the two large American organizations, giving them more input.

The split recognizes the fact that practices differ between Europe and the USA in two main respects. First, different drugs are approved by the European Medicines Agency (EMA) compared with the Food and Drug Administration (FDA). And second, the USA has a much higher number of cardiologists and cardiac electrophysiologists than Europe, and therefore, guidelines in Europe need to be directed not only to the specialist but also to the generalist.

The new ESC guidelines introduce a number of innovations, and the first three involved particularly difficult decisions.

The task force had to decide whether to disturb the simple method of learning how to risk stratify patients with atrial fibrillation with regard to stroke risk, in order to improve the accuracy of the stratification.

For the last 5 years, a system has been used that is easily remembered by the acronym CHADS2, which stands for cardiac failure, hypertension, age equal to or over 75, diabetes, and stroke. The 2 indicated that there were two points for stroke, whereas everything else had one point.

Patients with a score of 0 did not need treatment and those who scored 2 needed treatment. ‘But a lot of patients are left with a score of 1, where there’s no clear guidance about whether the patient should be treated in one way or another’, says Professor John Camm, FRCP, FESC, FACC, BHF Professor of Clinical Cardiology, St George’s University of London.

The new guidelines advocate continuing to use the CHADS2 system, but for patients who score in the unclear area, a new scoring system with additional risk factors should then be used. The system CHA2DS2VASC introduces vascular risk, another point for age over 75, a single point for over 65, and a point for female gender. Camm says: ‘It’s just a refinement to try and improve the prediction of thromboembolic risk’.

A new antiarrhythmic agent, dronedarone, has been introduced on to the market and the task force needed to decide whether to follow European (EMA), American (FDA), or local (e.g. NICE in the UK) regulatory recommendations for its use, or whether to adopt a more cautious approach.

They elected to recommend it for use along the same lines that the EMA, but were particularly cautious for patients with any moderate or severe heart failure. ‘That is because we have argued that there is still only clinical trials experience and not sufficient clinical experience to know whether it can be safely used in patients with more severe degrees of heart failure’, says Camm.

A third difficult area related to the use of left atrial ablation. The technique is used to isolate triggers and modify substrates that support atrial fibrillation, and recommendations for its use have been extended.

The guidelines argue that there is a group of patients who have little or no heart disease and have highly symptomatic paroxysmal atrial fibrillation in whom it is possible to consider doing a left atrial ablation procedure early in the course of disease, before trying antiarrhythmic drugs.

The recommendation is based on data which suggests that an ablation procedure is at least as good as antiarrhythmic drugs, and for some, it would be the patient’s preference. Camm says: ‘In this particular group of patients the risks are low and therefore it seems to be a reasonable decision that the patient and physician could take’.

There are other new elements that have been introduced to the guidelines. Upstream therapy with angiotensin-converting enzyme (ACE)-inhibitors, angiotensin receptor blockers, statins, and polyunsaturated fatty acids (PUFAs) has been reassessed. These agents have been used in an attempt to modify the progression of the underlying disease and the atrial fibrillation substrate.

Previous guidelines said very little about the use of upstream therapies. The task force constructed what it believes are appropriate guidelines on the basis of an evidence base that has developed over the last 5 years or so.
For PUFAs, they did not think that there was any evidence that they were valuable in atrial fibrillation. For statins, they thought that there was moderately good evidence. And for ACE-inhibitors and angiotensin receptor blockers, they thought that there was reasonable evidence that they were of some value.

The guidelines also propose new recommendations for controlling the heart rate in atrial fibrillation. Although they recognize that the strategy of controlling the heart rate in atrial fibrillation is valuable, they assert that the extent of rate control is not as critical as was believed previously.

The recommendations come after the results of a large clinical trial in Holland, RACE-2, which were reported last November. For the first time, the trial randomized patients to receive either strict rate control (a low rate) or lenient rate control. Lenient rate control proved to be just as good as strict rate control.

‘It seems that at least in patients who don’t have symptoms directly related to their fast heart rate, that there’s no advantage in reducing the heart rate to lower levels than were recommended in previous guidelines’, says Camm.

The guidelines also recognize the fact that atrial fibrillation occurs in endurance athletes and makes recommendations for the management of atrial fibrillation in this specific situation. It was felt that physicians need to appreciate that people who exercise, particularly competitively, and particularly with endurance sports, are likely to develop atrial fibrillation. Competitive athletes are difficult to manage because many of the treatments that might be offered are not allowed. There is also a tendency to recommend to the patient that he should stop being an athlete, advice which is not accepted easily. Athletes therefore represent a management problem and so it was decided to devote a special section to them.

As with any guidelines, the process exposed gaps in evidence and pinpointed areas where future research is needed. In particular, the task force identified the need for much more information about the early management of atrial fibrillation. The question remains: if physicians are more aggressive in the management of this condition earlier on, would they prevent the inexorable development of permanent atrial fibrillation and heart disease which is due to the atrial fibrillation rather than the reverse.

The task force also felt that most of the therapies for atrial fibrillation had not been subjected to large clinical trials with hard endpoints such as mortality or hospitalizations and that more therapies need to be tested in that way. An exception to this is the anticoagulant drugs which have been very substantially studied in this way and the new antiarrhythmic drug dronedarone.

Such information from clinical trials is needed for the remaining therapies, and particularly for ablation techniques, which are currently described only in terms of their effectiveness at getting rid of symptoms and perhaps eliminating or reducing atrial fibrillation on recordings of the heart beat.

J. Taylor, MPhil

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**Climbing the academic ladder in cardiology: UK**

Climbing the academic ladder in the UK is structured to ensure that trainees learn everything within the cardiology curriculum and yet still have time for research.

Getting into cardiology is extremely competitive and the process for gaining entry has become more transparent and robust over the past 15 years. In London with about 10 applicants for every post, for the past 10 years, candidates have been interviewed by 4–10 people, with each interviewer scoring independently and the scores being added up.

In the past, there were two routes for getting into cardiology: being an obvious high-flyer, or doing research to provide evidence of being good. The result was that many people were doing research with no intention of continuing their research and following an academic career.

The academic community decided to take a proactive approach towards attracting people into academic cardiology who wanted primarily to be academics—i.e. successful in research—and not primarily cardiologists. They needed a system that would enable them to assess whether a trainee had the ability to independently do good research and attract funding. It is not until a doctor has been part of a research team that it is possible to make a final judgement as to whether he will be successful as a self-starting research worker. ‘You often can’t tell at the outset whether somebody is going to be good at research, you can only make a provisional decision to take them into research and see whether they flourish or not’, says Dr Peter Mills, FRCP, FESC, FACC, consultant cardiologist at The London Chest Hospital, Barts, and The London NHS Trust.
Typically in the UK today, people enter the pathway of academic cardiology 4 years out of medical school. Exceptional candidates may enter the pathway 2 years after medical school, whereas others may be well into their cardiology training when it becomes clear to them that they want to pursue the academic side of cardiology. The latter can have the terms and conditions of their training programme altered to give them protected research time.

Trainees enter an academic training programme (such programmes started just 2 years ago) where they do enough clinical work with patients to become safe doctors, and work in a sheltered research environment where they can be assessed on their potential to become head of a research programme in 5-year time. It inevitably follows that trainees spend less time looking after patients, but during each 6-month clinical post, the trainee must achieve certain clinical competencies. Programmes last 6 years and the trainee is based in an academic institution, with opportunities for structured training in other hospitals.

An alternative and completely different route which is coming back into favour is doing research before getting a training number for cardiology. It involves taking a gamble and spending 2–3 years doing research after finishing basic medical training, then applying for a number in cardiology.

Students can boost their chances of getting into cardiology by doing an extra year in medical school to get a BSc. Not all UK medical schools provide the BSc, because of supervision requirements. The BSc is not a requirement for academic cardiology, but students who opt for it make better interview candidates for a training post in cardiology.

Funding bodies like the British Heart Foundation, the Medical Research Council, and the Wellcome Trust are keen that academic cardiologists who have finished their training then enter well-organized units whose top priority is to produce world class research, rather than to deliver good clinical care. Mills says: ‘They don’t really want consultants doing a bit of research on the side; they want academics doing some clinical work on the side’.

To facilitate this path, they support people who have finished their training and not yet become consultants by giving them funding for 5 years in a post with 40–60% protected time for research. During this period, they take the title senior lecturer, senior research fellow, or intermediate research fellow. Researchers who do not produce good research during that period will exit academic cardiology for an NHS consultant job. Those who do are on track to become readers and then professors.

In much of continental Europe, professors are the head of a limited number of pyramids and have administrative responsibilities. But in the UK, the number of professorships is not limited and people are not necessarily in charge of a department.

The majority of mainstream academics do not spend time as a consultant, but stay with the title senior lecturer or equivalent until getting a chair, which usually takes 5 years. Making it to professor status tends to be a qualitative judgement rather than a quantitative judgement in the final analysis, but the quantity and quality of publications plays an important role.

Private practice is often a temptation, and although there are few restrictions on academics doing private practice, such patients are demanding and time-consuming. To avoid deleterious effects on their research time, academics often opt out of private work.

The number of consultant cardiologists and trainees per head of population has increased enormously in the UK over the past 10 years and there is an informal view that there may now be too many trainees.

Although some cardiologists successfully combine academia with an NHS career, Mills believes that as the NHS becomes more competitive and market-driven, the academic world will become more attractive. But academia comes with uncertainty; if a professor is unable to attract research money, his or her position may come under severe scrutiny. An NHS consultant post is a more secure income stream.

Europeans from outside the UK may struggle to be NHS consultants because the system of health-care delivery will come as a culture shock. But not so in academia, where they will receive a warm welcome.

Mills says: ‘In academia if you’ve got good ideas, can lead a good research team and produce research output, that in theory and to some extent in practice is an international skill that breaks down cultural and national borders’.

J. Taylor, MPhil
The first European Society of Cardiology Association is born

Jen Taylor reports on the European Association of Echocardiography now in its 18th year

The European Association of Echocardiography (EAE) was created in 2003 from the now dissolved European Society of Cardiology (ESC) Working Group on Echocardiography.

Professor Fausto Pinto, MD, from Lisbon, Portugal, played a pivotal role in the transition, which came about because the working group had grown to the extent where it had a journal—the European Journal of Echocardiography—and a successful annual congress called EUROECHO.

The ESC thought that such a complex working group required a more organized structure with a president, board, and group of officers, and so the ESC's first Association was born.

The mission of the EAE is to promote excellence in clinical diagnosis, research, technical development, and education in cardiovascular ultrasound in Europe.

In 2004, it was the first to launch a certification programme, which kicked off with the individual certification of competence for transthoracic echocardiography. In 2005, it launched individual transoesophageal echocardiography certification together with the European Association of Cardiothoracic Anaesthesiologists (EACTA).

A year later, individual certification for congenital heart disease echocardiography was jointly introduced with the European Association for Paediatric Cardiology (EAPC) and the ESC Working Group on Grown-up Adult Congenital Heart Disease.

In 2009, came the accreditation of ECHO laboratories in Europe. The programme was done in conjunction with the national societies of echocardiography throughout Europe, and today, six laboratories have been accredited.

Education through the web has been a success and is becoming the association’s major asset. It is developing several web-based platforms such as live online courses (webinars) that are being adopted by the other associations of the ESC.

This year the association will publish the first EAE textbook on echocardiography, which will be released at the EUROECHO Congress in December. It follows the EAE Core syllabus, which was produced last year.

EUROECHO is one of the major echocardiography congresses in the world and the largest in Europe. It has grown from 906 delegates in 1997 to 2947 in 2009.

The EAE's strong relationship with industry is played out through a round table which is held each year to discuss the best educational opportunities in which to cooperate to make EUROECHO more successful.

Last year, the European Journal of Echocardiography gained an impact factor of 1.917. The journal primarily publishes papers on original science, but also publishes reviews and recommendations. The EAE has a close relationship with the American Society of Echocardiography and most recommendations are a joint effort, providing a single voice on how to use ECHO in several clinical conditions.

The EAE was the first ESC association to charge a membership fee. Members pay €110 per year. But the fee has not been a deterrent; membership stood at 456 in 2005 and reached 1930 in 2010. The goal is to increase it further to enlarge the market for the EAE’s educational products and increase the quality of echocardiography throughout Europe.

The EAE is not interested in harbouring a large, inactive membership. The decision to charge a membership fee was a deliberate one, aimed at attracting members who would take an active role in the association.

The greatest challenge for the profession going forward is the economic climate, says Dr Luigi Badano, FESC, cardiologist and head of imaging in the Department of Cardiac, Vascular and Thoracic Sciences, University of Padua, Italy. He will be crowned president of the EAE for the 2010–12 period at December’s EUROECHO Congress.

‘For non-invasive imaging, the only way to grow and to remain relevant in the cardiology department is to have joint imaging departments’, he says.

The future of echocardiography is particularly vulnerable because of the pocket sized echo scanners being used by non-specialists such as internists and emergency physicians. Badano says: ‘If we do not ensure enough quality to the complete ECHO study performed in our labs, the ECHO technique will lose its power and be just like a normal ECG’.

Non-cardiologists need to be trained to use the portable scanners properly so that patients receive the correct diagnosis and ‘avoid mistakes that will affect the credibility of the entire ECHO world’, he says.

To that end the EAE began discussions with industry during its round table in July 2010 about how to cooperate on a training
A programme that is cost-effective and approved by the association. Plans are underway for a web-based self-assessment tool for maintaining competence and talks are afoot about funding.

As president, one of Badano’s tests will be to continue to develop the EAE’s educational tools, while taking into account the economic situation which will see changes in how medical education is sponsored and a reduction in doctors’ ability to travel. The main avenue for delivering education and staying in contact with members will be through the web.

A second task will be to evolve from an association dealing with a diagnostic technique into an association which addresses patients’ diagnostic problems in a cost-effective manner. This will mean bringing together expertise from different non-invasive imaging techniques.

Discussions aimed at identifying a common strategy began last March with the relevant working groups of the ESC: the Working Group on Cardiovascular Magnetic Resonance, the Working Group on Nuclear Cardiology and Cardiac CT, and the Working Group on Computers in Cardiology. Further talks have been held at the ESC Congress in Stockholm.

The name of the EAE and of the journal may be changed, and Badano says that the groups should run outcome studies together to find out which imaging technique (or combination of techniques) is the best for various clinical problems.

Badano admits that evolving into one non-invasive imaging association will be politically difficult. ‘The EAE is a very large association with thousands of members and strong assets’, he says. ‘The working groups are small and their main concerns are to maintain their scientific [niche] and financial autonomy’.

To address their concerns, it has been proposed that the editorial board of the new journal has associate editors for cardiac magnetic resonance (CMR), nuclear cardiology, and cardiac computed tomography (CT), and for computers in cardiology. And similarly the congress has a director of programmes for each of the three specialties.

To start, it has been proposed that the editorial board of the new journal has associate editors for CMR, nuclear cardiology, and cardiac CT, and for computers in cardiology. And similarly the congress has a director of programmes for each of the three specialties.

But Badano adds: ‘Probably in the future there will be no need for that because when people start working together to address patients’ needs in a collaborative way they realise that it’s much better than working for each different technique in a competitive way. Together we will grow and become more and more relevant’.

The second of a three-part question–answer series based on Lionel Opie

South African physician–scientist recalls that Oxford made the greatest impression, Harvard was intense, and Stanford upset the children

Barry Shurlock continues speaking with Prof. Lionel Opie, MD, DPhil, FRCP, who has just retired as head of the Hatter Cardiovascular Research Institute, Cape Heart Centre, Cape Town, South Africa

I think you came from a medical background: what was this like?

Yes, Dad was the general practitioner and my mother the nurse in small village or ‘dorp’ in the middle of the vast semi-desert in our interior called the Karoo. He took me to see patients on far outlying farms and taught me about their illnesses. Later, we moved to Cape Town and again I saw how a doctor could take care of patients and could make them feel better. Then, 1 day in the middle of World War II, when I was 9 years old, penicillin was discovered. Dad told me that the discovery of penicillin was made at the University of Oxford, so I made up my mind that I would go there to learn about research. Later, the opportunity cropped up, when I was awarded a Rhodes Scholarship.

Specializing in cardiology was almost accidental. At Oxford, I wanted to know more about the brain and hence I was placed in neurology, but when it came to a research topic, I was given a project in a neurology unit that specialized in artificial respiration.
by iron lungs and other mechanical devices to keep alive patients stricken with poliomyelitis and respiratory muscle paralysis. I was impressed that they died from cardiac and not respiratory problems, but at necropsy, the hearts looked normal so myocardial metabolism seemed to be the problem.

Then I went to a junior clinical position at the Hammersmith Postgraduate Medical School in London. The Chairman of Medicine was the famous Prof. Sir John McMichael who had shown that the Starling Law operated in the failing human heart. He told me that the era of the dominance of pumps and pressures in cardiology would pass and that the future of research lay in biochemistry and metabolism. Likewise, Prof. Andries Brink who has done so much to promote cardiology research in South Africa, and headed Medicine at the newly formed neighbouring University of Stellenbosch Medical School, strongly advised me to study heart metabolism. (Later, after Harvard, I worked in his group for 18 months.)

Thus, I used the third year of my Rhodes Scholarship to go to Harvard where I was part of a heart metabolism group at the Peter Bent Brigham name at that time Hospital. We showed that the heart preferentially used circulating free fatty acids for its main source of energy and that these fatty acids inhibited the oxidation of glucose. Our paper got into Nature when I was 29 and I was immensely proud of this work, which confirmed my belief in the crucial importance of myocardial metabolism.

**What other memories do you have from your time at Oxford and Harvard (and more recently Stanford)?**

Oxford made by far the greatest impression on me. I was there for three distinctive periods. The first time was as a Rhodes Scholar at Lincoln College. My great friend from Medical School, François Retief, went up with me. Oxford was a dream. We met all the other Rhodes Scholars, from other parts of South Africa, and others from the USA, Canada, India, and Australia. These Scholars were all in different disciplines and we had a great social time. Wherever you looked there were beautiful colleges. Beautiful and brilliant women were just starting to appear in significant numbers, and invitations to other colleges and house parties overflowed. Punting down the Cherwell on a sunny summer’s evening was another dream-like experience.

The second time at Oxford was after Harvard, to work as a junior fellow in the Department of the Nobel Prize winner, Sir Hans Krebs, who had discovered the Krebs citrate cycle. This was much more like hard work with much less socializing.

The third period at Oxford was much later when I was a Visiting Fellow at Merton College—large, rich, and famous for medical ties going back to William Harvey, who had been Warden of Merton in the 16th century. When he left, he also left behind an original copy of his book *On the Human Circulation*. As a fellow, albeit only for a short time, I experienced the wonderful food and wines of the High Table, and the brilliant conversation of the stream of famous visitors. I was again working in the Department of Biochemistry that Krebs had established. This short but very intense third stint in Oxford gave me insight into the great sophistication of the Oxford residential college system. There was immense talent in just one college, let alone all the talent in the many others. This was a truly mind-opening experience.

Harvard, where I went after the first stint at Oxford, was totally different. First, physically, the hospitals and Medical School spread into Boston, a very large flourishing city. No bicycling from place to place as in Oxford, no dreamy spires, and no fellows relaxing in College gardens. It was very intense, very dedicated, and far more advanced in hospital medicine than Oxford with a string of leading hospitals, including the Brigham, the Massachusetts General, the Beth Israel, and the Children’s Hospital. Harvard was overflowing with even more brains than Oxford but they were all so busy that it was difficult to talk to anyone.

Harvard was and is very well endowed and research money seemed no problem, unlike Oxford where I had to account for every penny spent on equipment and chemicals. Talent abounds. No wonder Harvard consistently comes out tops in world university ratings. I worked at the Brigham hospital and hardly ever went to the main Harvard campus some miles away. So, this was no university experience, rather a period of intensely focused work at one of the best academic hospitals in the USA and arguably in the world.

Stanford—that was much later, when I had just turned 50. By then, I was an established cardiac research worker and my wife and our two children aged 12 and 14 came along. The campus is huge, spread over about 25 square miles, with on-site housing for staff and visitors, so one never needed to leave it. So I could again cycle to work. My wife Carol [Sancroft-Baker] and I made our first contact with computerized systems and the rapidly expanding wonders of IT, for which Stanford with its close proximity to the Silicon Valley was, and is, famous. The over-relaxed and under-disciplined schools were a bit of a disaster and we left after 6 months with two unsettled and unhappy daughters.

![Three generations of Opie doctors, my daughter Jessica at graduation, now a haematologist, Lionel Opie, my father William Opie at 89, previously GP and their Paediatrician, my mother Marie and my wife Carol](https://example.com/Opie_family.jpg)

**Which of the many papers and books (and two journals) you have been involved in do your rate highest?**

Articles: The most influential articles were the seven review articles on Drugs for the Heart in The Lancet, which I wrote...
while on sabbatical leave in the department of Prof. Attilio Maseri in Pisa (my wife Carol had obtained a scholarship to study Italian). Florence and its wonders were nearby.

The most academically novel articles were three in *Nature* (fatty acids inhibiting glucose oxidation in the heart; the toxic effects of fatty acids on the heart; and the rescue of the fatty acid damaged the heart by glucose).

The only article that reached the popular press was in *The Lancet*, a short hypothesis summarizing several years of work on the biochemical cause of fatal ventricular fibrillation in model acute myocardial infarction, namely increased formation of highly arrhythmogenic cyclic adenosine monophosphate. This one got into the international papers from Cape Town to Japan (‘Docs discover the cause of fatal heart attacks etc.’).

**Books:** *Drugs for the Heart*, first published by *The Lancet* and then in subsequent editions in the USA by Saunders. Each of the chapters had one or more substantial international authors who co-authored with me. There were and are very intense evaluations of each drug as we argued about each change or each new drug. Each time we wrote for a new edition, it was a learning experience for me and we produced the most up-to-date text. Online inserts continue the updating between editions. It has been a particular pleasure working with my co-editor, Dr Bernard Gersh, from the Mayo Clinic, and now one of the editors of the *EHJ*, who also trained at Cape Town and Oxford, and a life-long friend ever since he lived opposite to our old home in Cape Town, just the other side of a small stream.

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**Company success stories: Medtronic**

**From a garage workshop to a billion-dollar enterprise**

Freelance medical journalist, Emma Wilkinson, MA, talks to Rob ten Hoedt, vice president of Medtronic’s cardiovascular business in Western Europe, about the growth of the world’s largest medical device company

The company was started 60 years by electrical engineer Earl Bakken and his brother-in-law, Palmer Hermundslie. Working out of a garage in north Minneapolis, the partners initially did work repairing and servicing medical equipment. Yet, within a few years, they moved into product design. Now with a turnover of 14.6 billion and employing over 38000 staff worldwide, it is hard to believe that Medtronic had such humble beginnings.

The most notable achievement of those early years came after a local heart surgeon set out to solve a major problem with external pacemakers available at that time. Dr C. Walton Lillehei was concerned that such pacemakers were bulky and most importantly had to be plugged into a wall socket putting them at risk of failure during a power cut. In fact, Lillehei had seen one of his paediatric patients die as a direct consequence of a blackout. Together with Medtronic engineers, they developed the first wearable external battery-powered pacemaker—inspired by a musical metronome—which was small enough to be worn and used by patients.

By the 1960s, the company had moved on to producing implantable pacemakers. In fact, by 1962, Medtronic produced 21 devices, and by the mid-1960s, they produced their first transvenous pacing system. Leap forward another three decades and Medtronic manufactures devices for use in areas as diverse as neurology, ENT, gastroenterology, and diabetes.

Yet, when asked what he believes to be the most important milestone in the company’s history, Rob ten Hoedt, President, Europe and Central Asia, points to a key step back in the early days of the company. ‘Right back at the beginning Earl Bakken wrote a mission statement to tell people what Medtronic was all about and that mission statement is still our guidance in life as a company. We go back to that time and time again; back to that one patient we are trying to treat’.

That mission statement, written in 1960, consists of six short points, which includes the main goal of applying biomedical...
people are being treated at home. In the past, all these patients would show up virtually bed bound. ‘The third thing is the ability to monitor our early days of the first large pacemakers which rendered a patient an example of how far medical technology has come, since those would not have been able to withstand a major operation. Heart surgery, providing a ‘new life’ to frail elderly patients who can replace damaged heart valves without the need for open standard medications. Secondly, transcatheter heart valves that relieved of their symptoms and to be successfully managed with patients who had few treatment options available to them, to be cardiac resynchronization therapy has enabled heart failure made a vast difference to what doctors are able to do for their patients, which ultimately will be less costly to the healthcare system’. And as with all technology, one of the key goals for the future development of medical devices is reducing size. Pacemakers have come a long way since that first battery-powered external device that was around the size of a paperback book—itself a substantial improvement on earlier bulkier mains operated models. And valves, stents, and other devices that can be delivered through a vein mean much of heart surgery can be done in a minimally invasive fashion, in some cases while the patient is awake. Yet, there is still work to be done, says Mr ten Hoedt. ‘There will be development in further minimisation and nanotechnology. We see a lot of opportunities for medical devices to become even smaller, more specific, and more effective in these diseases’.

**Call for ideas for atrial fibrillation education initiatives**

At the European Society of Cardiology (ESC) Annual meeting in Stockholm a campaign was launched calling on cardiologists to come forward with innovative ideas to increase the risk of atrial fibrillation (AF) and stroke.

The 1 Mission 1 Milli—Getting to the Heart of Stroke campaign, is calling on healthcare professionals, patient organizations and members of the public to submit ideas for projects to increase awareness and understanding of AF and its link to stroke, and to improve management of the disease.

People with AF are five times more likely to have a stroke, with statistics showing that as many as three million people worldwide have an AF-related stroke every year. The initiative is supported by the World Heart Federation (WHF), Atrial Fibrillation Association, AntiCoagulation Europe and Stroke Alliance For Europe (SAFE), and sponsored by Boehringer Ingelheim.

‘Increasing awareness can lead to earlier diagnosis of AF and to more patients receiving appropriate care—resulting in the potential prevention of more avoidable strokes’, said Prof Günter Breithardt, from the WHF. ‘Initiatives that work to prevent AF-related stroke will improve the quality of life for patients and have the potential to reduce health-related costs worldwide’.

Projects can be submitted online until 31 December 2010, after which applications will be reviewed by an expert panel of cardiologists and patient group leaders. In February 2011 shortlisted projects will be featured online with health care professionals, patient groups and the public invited to vote for the projects that they feel will have the greatest impact. A total of 32 awards are available totalling €1 million, ranging in value from €10,000 to €100,000.

To learn more about submission of projects visit [www.heartofstroke.com](http://www.heartofstroke.com)
Book review

Fast Facts, Cardiac Arrhythmias

Authors: Gerry Kaye, Steve Furniss, and Robert Lemery
Publisher: Health Press, ISBN 978 1 903734 88 9

The management of cardiac rhythm disturbances has changed dramatically in recent years. Earlier, the field of arrhythmias was purely diagnostic, with pharmacological therapy forming the mainstay of treatment. The recent introduction of electrical and catheter therapies has revolutionized the management of cardiac arrhythmias. Our understanding of the triggers and mechanisms of arrhythmias has improved, and the newer therapeutic strategies have extended our armamentarium for the management of arrhythmias that were once thought to be incurable. However, for many, the diagnosis and management of arrhythmias are still viewed as a complex and inaccessible area of modern cardiology shrouded in mystery and technical details.

Fast Facts: Cardiac Arrhythmias provides a non-complex, straightforward approach to the exciting field of arrhythmias, providing a better understanding of the mechanisms of arrhythmias and how a problem can be best managed. The highlights of this handbook include the description of normal electrical conduction within the heart, a simple electrocardiographic classification of arrhythmias, explanation of the mechanisms of arrhythmias, a comprehensive review of the presenting symptoms and signs, and a practical approach to clinical investigation. More detailed information is delivered on management options, which focuses on pharmacological treatment, electrical cardioversion, invasive electrophysiology studies, and catheter ablation therapies. The final chapter is devoted to cardiac devices—pacemakers and implantable cardioverter defibrillators, which are now established as the basis of therapy for patients with bradycardias and ventricular tachyarrhythmias, and cardiac resynchronization therapy, which is increasingly being used for the management of heart failure in patients with electrical dyssynchrony.

This easily readable handbook provides a comprehensive practical resource for primary care physicians, cardiologists in training, nurses, and technicians, as well as for medical students seeking an up-to-date clinical overview of the field of common arrhythmias.

Prof. Firat Duru
Director, Pacing and Electrophysiology
Cardiology Clinic
University Hospital Zurich
Zurich, Switzerland

People’s corner

The People’s Corner Box is about cardiologists: promotions, new positions, prizes won, awards given, retirements and obituaries. Please submit news of yourself or of a colleague (maximum 400 words) to Dr Andros Tofield at docandros@bluewin.ch

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