A brief history of the European Society of Cardiology

In 2009, the European Society of Cardiology (ESC) is a complex modern medical organization with increasing influence not only on health-care professionals but also on the health policy of European governments through the Heart Health Charter. It was not always like that. Robert Short summarizes the history and development of the ESC to become the organization it is today.

The history of the development of the ESC, as remembered by the living past-presidents, has been published in a booklet. Whether the concept of the ESC was born in 1948 or before the Second World War is unclear. But what is certain is that on 29 January 1949 in Brussels 14 National Societies laid its foundations by drawing up provisional statues and appointing a Board with Gustav Nylin from Stockholm as President. In 1950, the ESC’s statues were adopted at the first General Assembly – of about 200 people – held during the World Congress of Cardiology in Paris.

Restructuring the ESC for the future

In 1976–1980, Dr Paul Hugenholtz (President 1984–1988), when councillor of the ESC, set out the steps that gave the ESC the organizational structure from which the current-day Society could develop. He said ‘I did not create the ESC. I visualised what the component parts of today’s organisation would be and put them together.’ Dr Hugenholtz is Emeritus Professor of cardiology at the Erasmus Medical Centre, Rotterdam. He and Professor Henri Denolin, ESC President during 1976–1980, implemented these steps:

- The creation of a journal which became the European Heart Journal, first published in 1980.
- The laying of the foundations for a European-wide congress. A key decision was to have the ESC’s own Congress Organization rather than dismantling the congress team every time it passed to another National Society to host. From 1952 until 1988, a different National Society hosted the Congress every 4 years. In fact, it was not until 1988 that conferences became annual.
- The setting up of Working Groups. These Working Groups brought together the energy and creative minds of young researchers and cardiologists across Europe who had similar professional interests. These ‘horizontal fibres’ interweaved with the existing traditional ‘vertical fibres’ of the National Societies creating a very strong organizational fabric across the ESC.
- The launch of an ESC Fellowship programme to recognize and foster a cadre of talented physician-scientists that would provide the manpower for the initiatives of the ESC.
Although the architect for this blueprint for the future, even Dr Hugenholtz could not have foreseen today’s ESC. In 2006 he admitted, ‘The ESC has perhaps in some ways outstripped my vision of it, thanks to the efforts of my colleagues, who shared my vision.’

ESC past presidents

<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950–1956</td>
<td>Gustav Nylin (D)</td>
<td>Sweden</td>
</tr>
<tr>
<td>1956–1960</td>
<td>Evan Bedford (D)</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>1960–1964</td>
<td>Jean Lenègre (D)</td>
<td>France</td>
</tr>
<tr>
<td>1964–1968</td>
<td>Luigi Condorelli (D)</td>
<td>Italy</td>
</tr>
<tr>
<td>1968–1972</td>
<td>Pavel Luk (D)</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>1972–1976</td>
<td>Herman Snellen (D)</td>
<td>Netherlands</td>
</tr>
<tr>
<td>1976–1980</td>
<td>Henri Denolin (D)</td>
<td>Belgium</td>
</tr>
<tr>
<td>1980–1984</td>
<td>Franz Loogen</td>
<td>Germany</td>
</tr>
<tr>
<td>1984–1988</td>
<td>Paul Hugenholt</td>
<td>Netherlands</td>
</tr>
<tr>
<td>1988–1990</td>
<td>Hans-Peter Krayenbühl (D)</td>
<td>Switzerland</td>
</tr>
<tr>
<td>1990–1991</td>
<td>Attilio Reale (D)</td>
<td>Italy</td>
</tr>
<tr>
<td>1991–1994</td>
<td>Michel E Bertrand</td>
<td>France</td>
</tr>
<tr>
<td>1994–1996</td>
<td>Philip A Poole-Wilson</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>1996–1998</td>
<td>Gunter Breithardt</td>
<td>Germany</td>
</tr>
<tr>
<td>1998–2000</td>
<td>Lars Rydén</td>
<td>Sweden</td>
</tr>
<tr>
<td>2000–2002</td>
<td>Maarten L Simoons</td>
<td>Netherlands</td>
</tr>
<tr>
<td>2002–2004</td>
<td>Jean-Pierre Bassand</td>
<td>France</td>
</tr>
<tr>
<td>2004–2006</td>
<td>Michel Tendera</td>
<td>Poland</td>
</tr>
<tr>
<td>2006–2008</td>
<td>Kim Fox</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Current president (2008–2010)</td>
<td>Roberto Ferrari</td>
<td>Italy</td>
</tr>
</tbody>
</table>

The ESC Congress 2009 will be in Barcelona, Spain, 29 August to 2 September, with ‘Prevention and Risk Factor Identification’ the highlight theme of the congress. Roberto Ferrari, current ESC President and Fausto Pinto, the Congress Programme Committee Chairperson jointly write: ‘The meeting will reconfirm the ESC’s commitment to scientific exchange on a global scale and, in our respective Roles as ESC President, and Congress Programme Committee Chair, we will offer regeneration, evolution and excellence.’

**Professor Ferrari. © ESC Congress 2008.**

**Working Groups**

Currently there are 19 Working Groups and five Associations. In recent years, Working Groups with interests that converged were regrouped into Associations within the ESC, each under a separate President, President-Elect, and Board. To be an ‘Association’ the organizations had to be able to run their own congress, be financially autonomous, have a journal and have a membership of at least 250. Currently there are five Associations:

- European Heart Rhythm Association (EHRA), Congress EuroPace;
- European Association for Echocardiography (EAE), Congress EUROECHO;
- European Association of Percutaneous Cardiovascular Interventions (EAPCI), Congress EuroPCR;
- European Association for Prevention and Cardiac Rehabilitation (EACPR), Congress EuroPrevent;
- Heart Failure Association (HFA) Congress, Heart Failure Congress.

Jean-Pierre Bassand (ESC President 2002–2004) believes that these Associations have managed to keep the subspecialties of cardiology within the ESC.¹ He says: ‘It also helped to avoid the fragmentation of our discipline that has occurred in North America where the discipline of cardiology is represented by more than ten different subspecialty groups, and an equal number of pressure/interest groups, with the subsequent loss of coherence and influence at government level.’

**Affiliate National Societies**

In 2003, the concept of Affiliate National Societies was accepted. In 2008, Kim Fox stated in his opening address at the ESC Congress in Munich that 17 new countries had joined the Society in 2008 as affiliate national societies. He said, ‘Until two years ago, the ESC had only five affiliate national societies. But I have argued that national boundaries—politics—are less important to us than our mission to fight heart disease. So there are now a total of 22..."
affiliated member societies representing populations more numerous than Europe’s. These include those from Japan, South East Asia, Australasia, Indian subcontinent, Middle East, Central and South America, and South Africa.

Professor Fox, opening ceremony. © ESC Congress 2008.

New initiatives under development

The ESCs European Heart Research Foundation, designed to encourage and support multinational research in Europe has had its rules and charter drawn up and is being formally registered, it was reported by Professor Fox at the Munich Congress. He also said that the Certification and Revalidation Programme is developing well and is beginning to harmonize education, training, and research across Europe.

Political influence on health

Lars Ryden (ESC President 1998–2000) determined that the ESC should become known as ‘a natural partner for a variety of players within the field of cardiovascular medicine’ and to take the ESC from being a cardiology club to a public policy-making society. One of the first steps was to make more prominent the existing mission statement of the ESC by a formal launch beyond an audience of cardiologists: ‘To improve quality of life in the European population by reducing the impact of cardiovascular disease.’

The ESC sought to engage with the European Union and European Commission and worked more closely with the European Heart Network (EHN). The collaboration with the EHN led to the Saint Valentine’s Declaration on February 14, 2000: Every child born in the new millennium has the right to live until the age of at least 65 without suffering from avoidable cardiovascular disease. Prevention was now high on the ESC agenda.

Heart Health Charter

Michael Tendera (ESC President 2004–2006) reports1 that the Heart Health Conference was held in Luxembourg in 2005, co-organized by the European Commission, the Luxembourg Ministry of Health, and the ESC. The objective of this meeting was to form a heart alliance between the Cardiac Society and the Ministry of Health in each EU country. In 2006 the Heart Health Charter was prepared and in 2007 the Heart Health Charter was launched. The ESC and the EHN, with the support of the European Commission and the World Health Organization—Regional Office for Europe, developed the Charter to prevent cardiovascular disease in Europe and many governments throughout Europe have signed this document and pledged to implement its content.

References

1. ESC. How did the European Society of Cardiology actually begin? And where is it now. A brief history as remembered by its past presidents.
2. Short R. Circulation: European perspectives. 7 November 2006; f175–f176.
3. European Society of Cardiology. A to Z European Society of Cardiology. The definitive guide to the ESC.

Portrait statements of the International Associate Editors of the European Heart Journal

William T. Abraham, MD, FACP, FACC, FAHA, Professor of Medicine, Physiology, and Cell Biology; Director, Division of Cardiovascular Medicine; and Deputy Director, Davis Heart and Lung Research Institute, The Ohio State University, OH, USA.

Heart failure treatment has moved into a device era, ushered in by cardiac resynchronization therapy (CRT), says Professor Abraham, who designed and led the study that resulted in the first US Food and Drug Administration regulatory approval of CRT in the USA. ‘Cardiac resynchronization therapy and implantable cardioverter defibrillators are really just the beginning,’ says Professor Abraham. He is investigating the use of implantable haemodynamic monitors—devices that allow cardiologists to manage patients remotely in a very precise fashion.
He adds: ‘Looking down the road beyond devices, we believe that cell-based and gene-based therapies are really the next big thing.’

Professor Abraham has been a national or international principal investigator for a number of very large multicentre trials of drugs and devices in heart failure. He believes that while there will be some promising drugs in future, they will not come at the same pace or deliver the same level of success as in the past, and drug companies will turn their attention towards gene-based and cell-based therapies.

His research also encompasses integrative physiology, trying to understand relationships between cardiac, renal, and circulatory physiology, in particular the influences of neurohormones and haemodynamics in heart failure.

The relationship between sleep and congestive heart failure has been another focus. At least 50% of patients with heart failure have sleep apnoea. ‘What you see are two interrelated vicious cycles—of sleep apnoea and of heart failure—which ultimately perpetuate one another and result in worsened outcomes,’ says Professor Abraham.

‘We are trying to understand the mechanisms by which heart failure and sleep apnoea are interrelated, and in particular focusing on diagnosis and treatment, and the potential for improving outcomes.’

Professor Camici’s research career began with studies on the coronary circulation at the University of Pisa in the 1970s, using radioactive microspheres to measure myocardial blood flow in large animals.

At the same time he became interested in glucose metabolism in ischaemia. He says: ‘I started to look at the consequences of abnormal myocardial blood flow during ischaemia on the heart tissue and did studies of myocardial metabolism.’

In 1979–1980, he used deoxyglucose to produce maps of glucose utilization in the heart, but when a new technique became available—positron emission tomography (PET)—he was able to produce the same maps in humans non-invasively, at the Hammersmith in London. Prof Camici helped set up the PET system in Pisa, and, in addition to measuring glucose utilization, he used it to measure myocardial blood flow non-invasively in humans.

The 1990s brought a move in London to start a group in cardiovascular research using PET. He has since become a world expert in the pathophysiology of ischaemic heart disease and the application of PET to cardiovascular research.

Prof Camici’s research today includes studies on the preclinical manifestation of cardiovascular disease, looking at the coronary microcirculation and at the identification of unstable plaques using PET and computed tomography. Other areas of interest are the long-term consequences of myocardial ischaemia on heart function and metabolism, and myocardial hibernation.

He says: ‘The spin-off of this research has been the original demonstration that the myocardium of patients with heart failure is insulin resistant.’ Prof Camici has developed a group that uses animal models and human tissue to study the molecular mechanisms of insulin resistance, which he believes could play a role in the progression of heart failure.

Professor John E. Deanfield, MD, FRCP, FESC, FACC, Professor of Cardiology, University College London, London, UK.

Professor Deanfield trained first as an adult cardiologist then as a paediatric cardiologist, which enables him to straddle two research areas.

The first is long-term outcome for children born with congenital heart disease, of whom 90% now survive into adulthood. Prof Deanfield’s research uses the long-term results of interventions in childhood and feeds them back into improving care in childhood.

To take an example, the operation used for many years in blue babies, who had transposition of the great arteries, was highly successful in childhood but led to early failure and death in adolescence and adult life. Prof Deanfield says: ‘The late results were the spur to introduce a new operation called the arterial switch operation which had initially a higher mortality but turned out to have much better long term outcomes.’

A second area of interest is the concept that the pathology of adult cardiac disease, such as atherosclerosis, begins in childhood. ‘Instead of trying to treat and research atherosclerosis in its advanced stage, when it is largely irreversible, our group has pioneered the idea that we ought to be understanding what it is that initiates and drives the disease over the first 30, 40, and 50 years, before it becomes a clinical problem,’ explains Prof Deanfield.

His group has developed non-invasive tests of key aspects of the biology of atherosclerosis, such as endothelial dysfunction, and they then look at ways of intervening early on. In addition to looking at the impact of traditional risk factors like blood pressure and cholesterol, novel factors like inflammation are explored, and more recently the impact of childhood obesity on the arterial wall.

Prof Deanfield concludes: ‘My concept is lifetime management of cardiovascular disease, whether it be congenital, whether it be acquired atherosclerosis. Our philosophy is long term management of the children and early management of the adult.’

Professor Stefanie Dimmeler, PhD, FESC, FAHA, research scientist, Institute of Cardiovascular Regeneration, Centre for Molecular Medicine, Goethe-University, Frankfurt, Germany.

Professor Dimmeler’s research interests include tissue repair and neovascularization. ‘Our aim is to improve stem cell therapy for
patients with acute myocardial infarction and heart failure,’ she says. She has been involved with the Re-infusion of Enriched Progenitor Cells and Infarct Remodelling and Acute Myocardial Infarction (REPAIR-AMI) trial, a double-blind, multicentre trial which showed the benefit of bone marrow-derived cells.

Prof Dimmeler is optimistic about the future of stem cell therapy, but she adds: ‘On the other hand, a lot of basic science is needed to improve what we have done so far. We have just taken the first step in clinical practice and it’s safe, there are some signs of efficacy but clearly we can do better, or we should do better in the future.’

Improving cell therapy requires an understanding of basic mechanisms. So while Prof Dimmeler does work on stem cells, her main area of research is vascular biology, and she conducts many studies on signalling.

‘There is an interest in how cells interact, how they home-in, and how they differentiate into different cardiovascular lineages,’ she says. The work requires research on several levels ranging from growth factor-mediated signalling to epigenetic regulation of gene expression without losing the general picture. She explains: ‘If the cell differentiates better but does not home-in anymore, you gain nothing. If cells do not differentiate but home very nicely, you may also gain nothing. So I think you need to see this in a complex interaction.’

The picture is further complicated by the fact that age and risk factors for coronary artery disease impair the patients’ endogenous stem cells used for autologous cell therapy. Prof Dimmeler is attempting to improve stem cell function to compensate for the reduced function in aged and diseased patients.

By Jennifer Taylor, freelance journalist

---

Development of the ECG from string to wireless

The development of the modern electrocardiogram (ECG) machine from Einthoven’s string galvanometer has required the dedicated and tireless research of many physiologists and physicians. Diana Berry, medical historian and freelance writer, outlines these developments which have made the ECG such an important and integral diagnostic tool in cardiology.

In these modern times of the neat, portable ECG machine which can monitor a patient’s myocardial activity for several days, it is hard to imagine the demands and complexities of Einthoven’s string galvanometer which had a mile long wire and required the subject to be seated with limbs in buckets of salt water. Nowadays, the buckets of salt water have been replaced by the so-called ‘limb leads’ of the modern 12-lead ECG.

The earliest galvanometer developed in 1794 could sense but not measure electricity, however, a further development came in 1849 when Emil du Bois Reymond (1818–1896) of Berlin and founder of modern electrophysiology added a two-position switch which would allow current measurement; this was called a ‘rheotome’, i.e. a ‘flowslicer.’ Some 20 years later came another important modification of the rheotome to allow for variation of the interval between stimulation and sampling. With the newly developed ‘differential rheotome’ as it was called, the first ECGs were obtained by placing electrodes directly onto frog hearts.

Back in the 1870s Alexander Birnck Muirhead (1848–1920) an electrical engineer specializing in wireless telegraphy was studying for his Doctor of Science degree at University College London; he then completed his DSc at St. Bartholomew’s Hospital, London (1869–1872) where he attached wires to a feverish patient’s wrist in order to have a record of the patient’s heartbeat, which earned him the credit for recording the first human ECG. The physiologist John Burdon Sanderson directly recorded and visualized such activities using Lippmann mercury-filled capillary electrometer developed by Gabriel Lippmann (1845–1921) in 1872 in order to achieve a greater sensitivity which was found lacking in the ‘differential rheotome.’

In 1876 the French physicist Etienne-Jules Marey (1830–1904) who had been involved in developing his ‘sphygmograph’ to make graphic records of auricular and ventricular blood pressure
and subsequently worked on photographic recording, adapted the mercury-filled capillary electrometer of Lippmann to photographic registration which enabled him to make a record of the electrical activity of the exposed heart of frog and toad. 1

The British cardiologist, Augustus Désiré Waller (1856–1922) who worked at St. Mary’s Hospital, London was the first to approach the heart from an electrical point-of-view. Waller’s electrocardiograph machine essentially consisted of a Lippmann capillary electrometer which was fixed to a projector and the trace from the heartbeat was projected onto a photographic plate which was fixed to a toy train allowing the heartbeat to be recorded. Waller used Marey’s equipment to detect potential cardiac variations on the body surface of his dog Jimmy and also in human studies.

If we now return to the work of Willem Einthoven (1860–1927) mentioned above, it was his somewhat clumsy but reliable recording instrument, i.e. the string galvanometer which really laid the foundation for universal deployment of the ECG as we know it today. Einthoven, who in 1886 became Professor of Physiology and Histology at the University of Leiden in Holland, was awarded the 1924 Nobel Prize in Medicine for his successful development of the string galvanometer. After attending the first International Congress of Physiologists at Basel, Switzerland in 1889 where he saw Augustus Waller demonstrate his techniques using the Lippmann–Marey instrument, Einthoven worked on a system which would improve upon Waller’s curves, which then showed only small excursions and limited detail and in Einthoven’s opinion required mathematical computations to correct them: this led to the development of the string galvanometer. The delicate platinum or silver-coated quartz string was suspended between the poles of a stationary electromagnet. As electrical currents from the heart passed through the string they produced deflections in proportion to the string tension and to these Einthoven assigned the letters P, Q, R, S, and T. These deflections (could be) screened and photographed as pictures of cardiac excitation.

Einthoven called them “electrocardiograms” or telegrams from the heart in that they gave an accurate bulletin of its electromotive condition. 2 Between 1903 and 1928 the size of the string galvanometer was reduced from 275 to 15 kg. Another improvement involved the size and volume modification of the electrodes and electrolyte solution cylinders, and these remained in use as late as 1930. The strap on electrode was introduced to the United States by Alfred Cohn in 1920. In 1932 suction electrodes were developed for the precordial leads with which further modification became the suction cups employed with 12 lead machines, now replaced with small adhesive tabs.

By 1908 Einthoven had already gathered an impressive collection of clinical tracings. At about this time, Thomas Lewis, a young physician and physiologist from London was eager to improve his registration method for the relationship between auricular and ventricular heart contractions; which ultimately was recognized as auricular fibrillation. Lewis was an excellent researcher whose work demonstrated the benefits of the electrocardiograph. Einthoven’s contacts with Lewis proved invaluable to both men who shared a deep commitment to their chosen subject each contributing his particular skills: Einthoven was an excellent physicist but lacked the knowledge of clinical matters, whereas Lewis was an experienced clinician and experimentalist. Einthoven felt that the value of an instrument depended on its use and indeed, usefulness, which Lewis was keen to demonstrate. The ECG allowed Lewis to record waves which spread through the atria and to recognize the electrical events which accompanied ventricular contraction albeit that his inferences were frequently contested. The ECG allowed recognition of ventricular wall hypertrophy and diseases of the pericardium. James Herrick (1861–1954) a physician from Chicago set up a description of coronary thrombosis and was able to recognize the resulting characteristic ECG changes. By the 1920s the clinical definition of acute myocardial infarction

String galvanometer ECG tracing, courtesy of Bayer.
was becoming consolidated though only after huge debate and negotiation over the meaning of clinical and machine-readable signs.\(^3\)

Albeit that the basic principles of those early days of the ECG are still in current use, there have inevitably been many advances in such things as the basic form of interpretation which now often features computerized interpretation of the ECG. Over the last couple of years several research papers have appeared which consider the reliability of results which may have been sent to core laboratories where after scanning and conversion to digital format they are then read on-screen. Inevitably, such ECGs may differ from original recordings as a result of variations relating to printers, scanners, and digitalization software. One such research article concludes that: “the printer and digitalization process account for significant differences in interval measurements in digitalized ECGs.”\(^4\)

Further research looks at the use of support vector machines for the detection of P- and T-waves in 12-lead ECGs in order to expand the scope of arrhythmia classification and to shorten the currently lengthy processing time.

So, although we may consider the ECG machine to have reached a very acceptable and reliable standard in comparison with the original string galvanometer, it is clear that there is place for further improvement and its further development offers plenty of room for ongoing research.

References


‘Sudden Cardiac Death’ makes the headline, but ‘Football for Health’ is the message

‘Sudden death’ is a term often used to describe the penalty shoot-out which ends so many finely balanced football matches. Occasionally, it has a more tragic meaning, but the risks are small and cardiologists should focus on using the ‘universal language’ of football to get their patients to exercise more, recommends Professor Jiri Dvorak MD, former Medical Director and Senior Consultant in the Department of Neurology at the Schulthess Clinic, Zurich, Switzerland, and now FIFA Chief Medical Officer, speaking with Barry Shurlock MA, PhD.

Kicking a ball around with 21 other players is reckoned to be the most popular sport in the world. From mega-stars earning millions, to the humble weekend player on the local dirt pitch, there are estimated to be 260 million registered football players in the world. And a recent comparison between football and such activities as jogging has given the thumbs-up to the little ball and 22 players.\(^1\) Little wonder that cardiologists and others who seek to increase people’s activity levels look to the game of football as a tool for public health. As an entrée to exercise, what better ice-breaker can there be? And it is no longer the preserve of men, as women’s football is growing apace.
One institution where these ideas have been developed into a science is the Schulthess Clinic, Zurich, Switzerland, a private hospital where the emphasis is on orthopaedics and musculoskeletal and spinal medicine. One of the subdivisions of its R&D department is F-MARC, the Medical Assessment and Research Centre (MARC) of the International Federation of Association Football (FIFA), headed by Dr Astrid Junge, PhD, under the direction of Professor Jiri Dvorak MD, former Medical Director and Senior Consultant in the Department of Neurology and now FIFA Chief Medical Officer. He fulsomely acknowledges the contribution of the FIFA General Secretary (now President), Joseph S. Blatter, who in 1994 invited him to develop what became F-MARC. Although he reckons that the FIFA job only absorbs 50% of his time, he says he is ‘100 per cent intellectually’ committed to it. He comments: ‘It’s the global impact of football on many, many people that really impresses me—one can reach huge numbers. Football is a health-enhancing activity and it could have a major influence on cardiovascular disease worldwide.’

Long gone are the days of Winston Churchill promoting refraining from sporting activities.

Professor Dvorak started life in Czechoslovakia, where he began to study medicine at Charles University, Prague. In 1968, after Warsaw Pact troops put an end to Alexander Dubček’s ‘Prague Spring’, he left for Zurich, Switzerland, where he continued his medicine studies. After qualifying, he became interested in musculoskeletal problems and in 1986 spent a year as a visiting professor in the Department of Biomechanics of the Section of Orthopaedic Surgery at Yale University, New Haven, CT, USA. He returned to the Schulthess Clinic to head the Department of Neurology of the Spinal Unit. He spends some time each year in New Zealand, where he is a consultant and a visiting fellow for the Musculoskeletal Medicine Diploma of Canterbury Medical School at the University of Otago, Christchurch, New Zealand.

Although F-MARC is funded by FIFA it is an independent part of the Schulthess Clinic, with the aim of protecting ‘the health of female and male football players on all levels of skill as well as [promoting] football as a health-enhancing leisure activity’. It assesses risks, records injuries, and makes recommendations for good practice. Most of the injuries are musculoskeletal—and this is a major focus of its activities—but the occasional, thankfully rare sight of an otherwise fit player collapsing with a cardiac arrest is so vivid that the subject of sudden death (SD) has been within its purview for some years.

One of its first SD projects, and the largest of its kind, was associated with the World Cup held in Germany in 2006. A few 3–6 months prior to the competition all teams were screened with a complete medical check-up, including electrocardiogram (resting and exercise) and echocardiography. Professor Dvorak says: ‘Although the quality of the screening varied between different countries, the outcome was that we had suspicious cardiac findings in 7–10 people, about 1–2% of all players. All this was done anonymously, so we could not intervene and cannot give the exact underlying pathology. If we knew who they were, an additional check-up would be indicated. Fortunately, there were no SD incidents during the competition. It is a very rare event, but the true prevalence is not known.’

The methodology paid off last year when players were screened for the 2008 African Cup of Nations held at several venues in Ghana (final: Egypt 1, Cameroon 0). A player from the Namibian team was found to have a severe congenital anomaly of the heart and agreed to withdraw from the game. The condition was found to be treatable and he was subsequently surgically treated successfully in Capetown, South Africa.

The first and last SD cardiac fatality to occur during a high-profile FIFA game was in 2003 during the Confederations Cup held in France, when 73 min into the semi-final against Columbia the Cameroonian player Marc-Vivien-Foé collapsed and died. After two autopsies his death was attributed to hypertrophic cardiomyopathy. At the time there was much controversy about whether the final should be played, but FIFA made the decision to proceed and France won 1–0 against Cameroon. Another tragically public SD occurred a year later, when Hungarian-born Miklós Feher, playing in a league game at Guimaraes for the Lisbon side S.L. Benfica, died in full view of television cameras. Feher had only just been called on as a substitute, and was instrumental in making the winning goal. In injury time he received a Yellow Card [a caution] and then suddenly leant forward in pain and fell to the ground. He was 24 years of age.

A new FIFA study is planned for the African Cup of Nations being held for under-17 year olds in Algiers in March [2009], when a F-MARC team of specialists from the Schulthess Clinic
and the University of Zurich, including a cardiologist and musculoskeletal specialists, working with local and team physicians, will carry out a medical check-up, including on-site echocardiography, on the 160 players taking part. Such studies are mounted against stiff opposition from medicolegal advisers, who are concerned that a player might be cleared to play and subsequently suffer a cardiac event, according to Professor Dvorak. He commented: ‘This is, of course, something that we as physicians face every day in our practice. We may miss a potential problem; we can’t provide absolute security with such screening. But with written consent and good understanding the legal problem should be solved in the general interest of the players. By focusing on the young players we hope to pick up the congenital heart abnormalities.

‘For amateurs FIFA have made recommendation to the International Olympics Committee—but in general all players should have a routine medical check-up and examination of family history. This can be done by a general practitioner alert to symptoms, who may then recommend an ECG or echocardiogram.’

He recommended that physicians and others with an interest in assisting local football clubs should consult the FIFA Football Medicine Manual or attend one of the 5-day residential courses run in various locations throughout the year. These courses rely on the principle of ‘Teach the Teacher’ so that once trained attendees can pass on their training to others in their locality. FIFA has run a large number of such courses in Europe and is now concentrating on spreading the message throughout Africa, Asia, Oceania, South and Central America, and the Caribbean. FIFA is also continuously developing an international network of specially trained physicians. And it accredits ‘FIFA Medical Centres of Excellence’ (currently there are nine worldwide) as regional centres where footballers can receive independent medical advice and help, and also to serve as regional research institutions, linked with F-MARC.

Reference


Obituary

Final farewell to Philip Alexander Poole-Wilson, President, European Society of Cardiology 1994–1996

Philip Alexander Poole-Wilson, Emeritus Professor of Cardiology at the National Heart and Lung Institute, Imperial College, London and Consultant Cardiologist at the Royal Brompton Hospital, died suddenly on 4 March 2009, whilst travelling to lecture medical students on his favourite subject, heart failure.

‘I am lucky that my hobby is cardiology’, he would often say to explain his huge enthusiasm about making a difference for patients with heart failure and other chronic cardiovascular disease. Such a dedication to the pursuit of knowledge was fortunate also for the worldwide cardiovascular community, stunned by his unexpected death at age 66.

Philip Poole-Wilson as president of ESC, courtesy ESC.
Philip Poole-Wilson was born in London, but moved to Cheshire as a child. Educated at Marlborough College, one of England’s finest private schools, he was recognized for his academic brilliance and enthusiasm on the sports field. His father was an eminent urologist and his mother a keen amateur racing driver.

Initially Philip decided to study natural sciences at Trinity College, Cambridge, winning a major scholarship. He continued to enjoy sports, including rugby and cricket, and excelled as a debater. Deciding at the end of his third year at Trinity that pure physiology was not for him, he won a prestigious place to St Thomas’ Hospital Medical School, qualifying in 1967. As a junior doctor he worked at the Brompton and Hammersmith Hospitals, returning to St Thomas’ as a registrar in 1971.

His first research interests were transmembrane ion exchange and the biochemistry of myocyte contraction. His ability was recognized quickly, with him winning a British American Travelling Research Fellowship to UCLA, California, enabling him to move with his wife, Mary, and their young family to the USA. He continued this research on his return to St Thomas’ in 1975, when he was shortlisted for the Young Investigator’s Award at both the British Cardiac Society and the American College of Cardiology.

Philip was appointed as Senior Lecturer at the Cardiothoracic Institute and Honorary Consultant Physician at the National Heart Hospital, Westmoreland Street, London in 1976. Four years later he was promoted to Reader, and quickly thereafter to Professor. In 1988 he became the Simon Mark’s British Heart Foundation Professor of Cardiology at the National Heart and Lung Institute, a post he held until his retirement in October 2008, building up a large department interested in all aspects of heart failure, from bench to bedside to population.

Always challenging dogma, and no respecter of pomposity, he enjoyed asking challenging questions, or to use his words—‘stirring things up’. His colleagues knew that when he got to his feet at the end of their lecture, the question would be kindly meant but not straightforward to answer!

Committed to transparency, he simplified processes and clarified the vision of all organizations with which he became involved. Philip served as the President of the European Society of Cardiology from 1994 to 1996, helping to strengthen the Society’s role and importance in Europe and further afield. From 2003 to 2005 he served as President of the World Heart Federation. He was a tireless advocate of the need for people and countries to work together to the greater good, learning from each other, and not repeating the mistakes of the past. Of particular concern to him was the need to draw attention to the epidemic of chronic cardiovascular disease in developing countries at a time when more attention was focused on infectious disease. He had returned from a trip to India a few days before his death, demonstrating his continuing support of collaborative research projects between different parts of the world.

Philip was hugely supportive of young talent. Many professors of cardiology across the world have had the privilege of training under him. He had an uncanny ability to spot young people with potential and to foster their growth and ultimate blossoming. He offered them wise counsel and support long after they had moved on and established their own departments.

Philip continued to see patients until he retired, and engendered huge loyalty amongst them. Always caring and meticulous, his observations on the natural history of disease and the risks and benefits of intervention were welcomed by his clinical colleagues, even if they did not always share his healthy scepticism.

His awards are too numerous to list, but highlights for him included the Gold Medal of the European Society of Cardiology (1996), Le Prix et Medicine de l’Institut des Sciences de la Santé, Paris (2001), and the Mackenzie Medal of the British Cardiovascular Society (2007).

The last medical conference Philip attended as a member of the teaching faculty where:

- He chaired the morning session: Heart Failure.
- Delivered the lecture: Iron and Erythropoietin for the treatment of Heart failure.
- Introduced and chaired: The Vifor International Satellite Symposium; Iron Deficiency Anaemia and Heart Failure, a new therapeutic approach.

His enthusiasm for work, undimmed to the last, was legendary, but he (miraculously) found time to pour energy into his other interests, including art, music, opera, gardening, and of course his beloved family. He is survived by his wife, Mary, two sons and a daughter.
Work was his hobby, and he died pursuing that hobby, meeting young students and doctors, encouraging, and challenging them to think for themselves. He will be missed by very many. The world of cardiology has lost a hugely important figure, but his legacy of challenging accepted ideas and insisting on proving one’s opinion will live on.

Reference


Martin R. Cowie, MD, MSC, FRCP, FESC
Professor of Cardiology, Imperial College London
Board Member of the Heart Failure Association of the European Society of Cardiology

CardioPulse correspondence: Dr Andros Tofield, Managing Editor CardioPulse, European Heart Journal. Email: docandros@bluewin.ch