Estonia celebrated its 16th anniversary of the restoration of independence on August 20, 2007, with a public holiday. “Since 1991,” says consultant cardiologist Dr Rein Kolk, “things have changed pretty rapidly, to the point where there is now steady development of the economy and the medical system.”

Estonia (Figure 1) has an estimated population of 1.36 million, of which 18% are 15 years of age or younger and 15% are at least 65 years old. Two thirds of the people live in urban areas. It has the highest gross domestic product of the Baltic countries and one of the lowest rates of unemployment (4.2%) in the European Union (EU).

Like the other Baltic countries, Estonia has high cardiovascular morbidity and mortality. The main risk factors include diet, low physical activity, tobacco consumption, and lifestyle habits. “Estonia has been an agricultural country for centuries. People’s dietary habits have been very difficult to change,” comments Dr Falk, “but in the last decade there have been some positive developments.” Tobacco and alcohol consumption have decreased, and people now pay more attention to their diets, with a decline in the consumption of fatty acids and products containing sugar. Physical activity also has increased. “To date, these changes have not impacted cardiovascular mortality,” says Dr Kolk, adding that “it will take time to filter through.”

Cardiovascular diseases represent the number one killer in Estonia, accounting for 54% of deaths. Malignancies rank second, with 19% of deaths. So, Estonians see the tackling of cardiovascular disease as a priority. A national programme of cardiovascular disease prevention began in 2002, paid for by the Estonian Health Insurance Fund, and the government has financed the National Heart Health Strategy since 2005 and will do so up to 2020. The strategy has several stakeholders,
including the Ministry of Social Affairs, the Ministry of Culture, the Ministry of Agriculture, and the Ministry of Education and Science. The Health Insurance Fund, a state body, finances around 80% of medical care. Individual patients pay the remaining 20% of costs for pharmaceuticals, dental care, and visiting fees to see specialists.

After regaining independence, the country made reforms in the planning and financing of health care. “Previously,” Dr Kolk says, “all decision making was made at a central government level in Moscow.” The government made 5-year plans in which it “very strictly specified” how funds should be spent, and healthcare providers had very little influence. “But now, the decision making has been decentralised quite a lot,” he explains.

As a result, hospitals can decide how they will spend their resources. For cardiology, that means the 2 largest hospitals in Estonia, in Tallinn and Tartu (Figure 2), can now provide the full range of cardiology services, including cardiac surgery. The only service not provided is heart transplantation. “Providing such a service doesn’t make sense for such a small country,” explains Dr Kolk. “Patients are instead sent to Finland, Italy, or Germany.”

Dr Kolk feels confident that Estonia now has a far higher quality of medical care than in the past. The Health Insurance Fund contracts with all healthcare providers, which must adhere to certain quality-assurance indicators, including maximum waiting times and accessibility of medical care. Estonia has up-to-date equipment, including equipment for percutaneous coronary interventions (Figure 3), and the number of interventions have reached, and in some cases exceeded, EU averages (Figure 4). Waiting times normally do not exceed 2 months, even for cardiac surgery.

“We have quite a good number of cardiologists,” says Dr Kolk, but he adds that “we started a full residency in cardiology that complies with EU regulations only after regaining our independence.” Before that, Estonian medical schools offered no appropriate residency as such. “Physicians were trained, but the amount and quality of training was not sufficient.” As a result, not everyone with a cardiology license in Estonia can do every procedure.

Since 1992, the University of Tartu has taken over residency. A student will spend up to 6 months of his or her residency in a larger centre abroad, in Scandinavia, Germany, England, the United States, or elsewhere. “It’s a financial problem, but this is our aim,” says Dr Kolk. “We refer to it as quite a serious fear that younger colleagues will leave Estonia for a better salary.” But, according to the figures, just 5% of cardiologists who trained in Estonia now work abroad permanently. “The salaries have increased considerably, especially during the last few years,” he says. “They are still lower than in the Nordic countries, but if you take living costs into consideration, salaries are becoming comparable.”

Two thirds of cardiologists in Estonia are women, a situation that Dr Kolk admits “is quite unusual. Historically, the medical profession in the Soviet era was not very well paid,” he says. “I think this is the main reason why males chose other professions than medicine.” But that should change soon; more women than men remain in training to become cardiologists, but the number of men has increased. At present, “with very few exceptions,” in Estonia men perform cardiac interventions and cardiac surgery. “One can hardly expect a change in this field in the future,” says Dr Kolk. He argues, “These tasks are more suitable to men because they are physically more demanding.”

As for the future of cardiology in Estonia, the
focus will involve prevention. A 10-year master plan in cardiology will span the years from 2005 to 2015; it has 3 main priorities: first, the prevention of cardiovascular disease; second, the implementation of up-to-date methods of diagnosis and treatment and increasing public access to cardiology care; and third, promoting outpatients services and rehabilitation. “In the future, more cardiological care has to move to outpatient care,” says Dr Kolk. Providers will limit hospital care to emergencies and treatments that require a high level of technology. Patients already can receive up-to-date cardiology services in hospital, but there are still some areas that need more work. Dr Kolk says, “We are still not happy with rehabilitation, care at home, outpatient clinics, and heart failure clinics. We have to develop these in our country.”

Another priority will involve fighting for better funding for cardiology. The Estonian Society of Cardiology, founded in 1963, has played a leading role throughout the history of modern cardiology in Estonia. The society has served as a counterpart in discussions and decision making with regulatory and funding bodies in the country and in the international arena. It also has played the key role in setting national standards in cardiology care and in implementing practice guidelines.

Estonia joined the EU in 2004 and hopes to take full advantage of its membership. To that end, collaboration has strengthened between the national societies of cardiology in the Baltic and Nordic countries. “Each of our countries separately is a small one,” says Dr Kolk. “If we want our voice heard in Europe, we have to unite.” The Nordic Congress of Cardiology and the Baltic Congress of Cardiology will merge for the first time in 2009, to form the Nordic Baltic Congress of Cardiology, which will take place in Reykjavik, Iceland.

With an increasingly ageing population, Estonia has grown increasingly similar to the European, especially Nordic, community. “The differences between the countries are diminishing,” says Dr Kolk. “We are getting the same problems other countries have faced in their development.”

But he hopes Estonia will learn from other countries’ experiences and avoid the same mistakes. The country has some very good examples to follow, such as Finland’s success at reducing hypertension. “If proper measures are taken, we will have good results,” he says. “The major challenge for the next 5 to 10 years will be the prevention of cardiovascular disease. We are pretty good at treating acute cases, but we would like to avoid the diseases developing to that stage.”

Jennifer Taylor is a freelance medical writer.

**The opinions expressed in Circulation: European Perspectives in Cardiology are not necessarily those of the editors or of the American Heart Association.**

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**Spotlight: Theresa McDonagh, MD, FRCP, FESC**

**A Profile of a Consultant Cardiologist Who Serves as Chair Elect of the British Society for Heart Failure**

Dr Theresa McDonagh, one of the United Kingdom’s leading specialists in heart failure, currently practises as a consultant cardiologist at the Royal Brompton Hospital, London, where she combines research with clinical practice. Jennifer Taylor, BSc, reports.

Theresa McDonagh always wanted to study medicine. After pursuing sciences at school, she trained in medicine at the University of Edinburgh, Scotland, qualifying in 1987. During her medical degree course, she took a year out to do a BSc honours degree in pathology.

She stayed on in Edinburgh for training in general medicine. She then moved to the other side of Scotland, to Glasgow, for a research fellow post in heart failure with Henry Dargie, MD, professor and consultant cardiologist at the Western Infirmary. “I was a research fellow there for 3 years, and then I stayed on as a lecturer/senior registrar in cardiology for 5 years until 1999,” she explains.

A consultant cardiology post at Glasgow Royal Infirmary followed, along with a senior lecturer post in the department of medical cardiology. Dr McDonagh took responsibility both for the provision of heart failure services at Glasgow Royal Infirmary and for the Scottish Cardiopulmonary Transplant Service.

The move to London came in 2004, when she took up the post of consultant cardiologist, with a special interest in heart failure, at the Royal Brompton Hospital (see Figure). She serves as clinical and research lead for heart failure,
and she splits her time equally between the two.

Dr McDonagh’s interest in cardiology began during her internal medicine training at Edinburgh. She spent a year working on diabetes mellitus. “I didn’t really like diabetes very much, which prompted me to think about what I did like,” she recalls. “Cardiology always came out on top, with its mixture of ‘acute things’ such as myocardial infarction, devices, heart failure, and laboratory-based work.” There was also the fact that, at the time, cardiology had the biggest number of trials going on.

“Looking back,” she says, “some time abroad might have enhanced my training.” She believes that working in a different healthcare system can offer a good learning experience, but she adds, “There was never really a point at which it seemed necessary to do it. When I finished one stage of my career, the next stage of my career was there waiting.”

Dr McDonagh’s work with Dr Dargie in Glasgow sparked her interest in heart failure. “I did a big project with him on left ventricular dysfunction in the population and the utility of brain natriuretic peptide. That underpinned all of the interest I’ve had in heart failure. The work in Glasgow is ongoing, and I still have an interest in the epidemiology of left ventricular dysfunction.”

Dr McDonagh’s clinical research in London focuses on novel biomarkers, such as apelin in heart failure, and on looking at the affects of heart failure therapies. She attends 3 clinics each week, mainly in the area of heart failure, and she does 3 ward rounds every week. As for teaching and lecturing, Dr McDonagh has a post as honorary clinical senior lecturer at the National Heart and Lung Institute in London. Teaching final-year students at the Royal Brompton and lecturing on the MSc course at Imperial College, London, represent just 2 of her commitments.

As a heart failure specialist, Dr McDonagh also does much teaching around the United Kingdom, and she travels internationally to give lectures, primarily related to her research. Being a cardiologist, with its long hours and travelling commitments, can take its toll on family life, but Dr McDonagh says, “I haven’t found it’s a problem.” But she recognises that, because it’s an intensive, acute speciality, with a lot of on-call and night work, “many women choose not to go into cardiology.” She adds, “Since I wanted to do it, I haven’t minded being so busy, but I’m not married. I think it’s difficult to combine cardiology with marriage and children.”

But things are changing. When Dr McDonagh started out, she says, “cardiologists in training did a bit of everything. That is very intense. Now cardiology is very specialised.” Because some of the subspecialities have less on-call work, Dr McDonagh predicts that they will appeal more to women. “I think things will improve there,” she says. As for herself, Dr McDonagh feels that she has an “ideal job.” The combination of clinical heart failure work, research, and travel to conferences makes for a good mix.

As for the future, she says the question will concern which new areas of research she will delve into. At the moment, she has an interest in biomarkers, particularly those associated with neurohormones. “We will find there are novel pathways that will become targets for treatments in the future,” Dr McDonagh believes. “So, the future holds novel drugs, such as neurohormonal antagonists and immunosuppressive agents, like those used in cancer and arthritis. We’re looking at it now, but in embryonic form.”

On the future in the field of heart failure, Dr McDonagh says that, ultimately, it will involve the regeneration of the heart with stem cells or gene therapy. “It’s going to be a very different world,” she predicts. “Meanwhile, I enjoy the enormous variety of what I do.” This includes seeing many patients, both as outpatients and in an inpatient setting. “And the good thing about work in heart failure,” she says, “is that it’s not interventional. Less time in the cath lab means more time to sit down and talk with patients.” And working alongside heart failure specialist nurses and pharmacists makes it a multiprofessional area, thus fostering a good, and very stimulating, environment in which to work.

“The fact that I have time to do research is a real bonus,” says Dr McDonagh, adding that such research leads to opportunities to go to conferences and meetings and discuss the latest papers. “It keeps you interested in the subject,” she says. “It’s very easy to get engrained in a routine. You can understand why some people tend to go on automatic pilot after a while.” She explains that doctors whose role is purely clinical are unlikely to be surprised by many things and could find themselves doing the job just for the sake of it. “But my post is unusual,” she says. Most of her colleagues with clinical contracts spend 80% of their time doing clinical work, with just 1 or 2 research sessions per week. And colleagues who focus on research have university contracts and do little clinical work. In the past, more doctors had 50/50 posts, but now such posts are rare. Dr McDonagh concludes, “I’m lucky to be working in a specialist tertiary hospital in central London that values research output, so it makes room for me and makes provision for appointments such as the one I have.”

Jennifer Taylor is a freelance medical journalist.
Conference Report: European Society of Cardiology Congress

With More Than 22 000 Active Participants, the Annual Congress of the European Society of Cardiology Is One of the Largest Cardiovascular Meetings in the World

European cardiologists met in record numbers in the beautiful city of Vienna, Austria, from September 1 to 5, 2007, to hear about the latest developments in the fields of basic science, clinical practice, and research, with a particular focus on heart failure. Attendees presented more than 3500 abstracts at the meeting. Keith Barnard, MB, BS, reports.

For any European cardiologist who did not manage to attend the 2007 European Society of Cardiology Congress, the success of this year’s meeting, attended in total by nearly 30 000 people, including exhibitors such as Circulation’s publisher, Lippincott Williams and Wilkins (Figure 1), should offer sufficient encouragement to make the journey next time. The president of the European Society of Cardiology, Kim M. Fox, MD, FRCP, FESC, professor of clinical cardiology at the National Heart and Lung Institute, Imperial College, London, United Kingdom, opened the proceedings, announcing that no fewer than 53 sessions would focus on heart failure, with 2 main sessions concentrating on the role of anaemia and the value of brain natriuretic peptides in clinical practice. The meeting provided the occasion for the introduction of a number of new guidelines, including those on cardiovascular disease prevention, valvular heart disease, cardiac pacing, arterial hypertension, and a universal definition of myocardial infarction.

Although one might have difficulty choosing a single topic that most captured the attention of the cardiology community present, attendees certainly discussed at length the presentation by Stephen W. MacMahon, BSc, PhD, MPH, director of the George Institute and professor of cardiovascular medicine and epidemiology, Newtown, Australia, on the Action in Diabetes and Vascular Disease: preterAx and diamicron MR Controlled Evaluation (ADVANCE) study. This trial suggested that lowering the blood pressure in diabetic patients with the 2 agents used in the trial, perindopril and indapamide, offered benefits that did not depend on the patient’s baseline blood pressure. This lowering of blood pressure reduced the risk of death by approximately 20%, prompting the authors to call for a reduction in blood pressure in all patients with type 2 diabetes mellitus, even if they did not initially present with hypertension.

The future of facilitated percutaneous coronary intervention (PCI) after acute ST-elevation myocardial infarction also had everyone talking. Stephen Ellis, MD, and Carlo di Mario, MD, PhD, and colleagues seem to have disproved the theory that early pharmacological interven-
following up so many cases such a long time. The study involved large numbers of patients, yet it had a high follow-up rate. When questioned about how he had achieved this, Dr van Domburg responded that he had maintained a relatively short follow-up interval between patient contacts, making it possible to keep track of most of the cases.

A superbly argued presentation came from John Camm, MD, FRCP, FESC, British Heart Foundation Prudential Chair of Clinical Cardiology at St George’s Hospital, London, United Kingdom. He spoke on the cost-effectiveness of implantable cardiac defibrillators and the matching of indications for their use to economic resources. He demonstrated to his audience that wealthy countries such as the United States did not have their demonstrably high rates of implantable cardiac defibrillator use just because of their money, and that other relatively rich countries had much lower rates. A key point in his explanation concerned the method used to measure cost-effectiveness; he noted how the initial outlay for this life-saving device can distort the picture. Although an implantable cardiac defibrillator has high costs, he explained, all the costs are “up front,” and this initial large outlay puts clinicians and economists off their use. On the other hand, some lifelong therapies have a relatively small initial outlay, perhaps just a month’s supply of medication, but continuing this for many years can lead to an overall cost higher than that of an implantable cardiac defibrillator. But health economists show less concern for this situation than when they see a large lump sum required at the outset of treatment. One solution, of course, would involve bringing down the cost of the devices.

Such presentations make it clear that attendees find this major meeting such a worthwhile experience for more than just the high-profile mainstream events. And a city like Vienna offers many other reasons to spend time looking around. Imperial Vienna has impressive and plentiful historic buildings, mostly around the Ringstrasse. The Museum of Fine Arts, the Parliament Building (Figure 2), and numerous palaces all merit a visit. Burggarten has a delightful tropical butterfly enclosure (Figure 3), next to the famous Palm House, and those with stronger nerves can try the giant Ferris wheel. St Stephen’s Cathedral offers a notable example of medieval architecture, with its impressive roof.

And one should not neglect the Viennese wine taverns, inns, and coffee houses, home to the ubiquitous schnitzels, delightful apfelstrudels, and rich Sacher tortes. For learning and leisure, Vienna in early September is hard to beat.

Dr Keith Barnard is managing editor of Circulation: European Perspectives in Cardiology.

References

Correction: In the article by Butera, “Meeting Report: The Sixth Interventional Workshop,” which appeared in the European Perspectives section of the August 28, 2007, issue of the journal (Circulation. 2007;116:f53-f54), the legend to Figure 2 (page f54) should refer to Dr John Cheatham (the surgeon pictured in the photo) rather than Dr John Carminati. Dr Mario Caraminati was the course director of the workshop. The publisher regrets the error.

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Figure 2. Impressive imperial buildings, such as the magnificent Parliament Building, can be found around the Ringstrasse.

Figure 3. The tropical butterflies next door to the Palm House in Burggarten make an enchanting sight.