A new *European Heart Journal, Cardiovascular Pharmacotherapy* was launched at the ESC Congress 2014 in Barcelona and begins publication in February 2014

Stefan Agewall MD PhD FESC FACC, is professor and senior consultant in Cardiology at Oslo University Hospital, Ullevål, Norway. He is the appointed editor-in-chief of a new *European Heart Journal* publication entitled: *European Heart Journal-Cardiovascular Pharmacotherapy*.

Agewall qualified as a doctor at Göteborg University in Sweden in 1986 and worked at the coronary care units of Sahlgrenska University Hospital and Karolinska University Hospital in Sweden, as well as Oslo University Hospital in Norway. He completed his PhD at Göteborg in 1994 and moved to the Karolinska University Hospital in 1999 to become head of the coronary care unit there. In 2006, he became Professor of Cardiology at Oslo University Hospital in Norway and has also held a position as senior cardiologist consultant there since then. Between 1997 and 1998 he undertook post-doctoral work at Auckland University in New Zealand working on different ultrasound projects with Prof. Norman Sharpe.

He is current vice-chairman of the ESC working group on Cardiovascular Pharmacology and Drug Therapy and will, in the autumn, step up as chairman of the working group. He is also a member of the Acute Cardiovascular Care Association and other working groups of the ESC. He has published > 160 peer-reviewed publications in the cardiovascular field and is on the Editorial board of the *European Heart Journal* and associate editor of *Atherosclerosis*. Apart from ultrasound studies, Agewall has worked with studies on endothelial dysfunction, cardiovascular damage markers, registry studies on heart failure and acute coronary syndrome.

Although the market place for cardiology-related journals is crowded and competitive, Agewall believes the new publication will cover an area that has changed dramatically over the last few decades. He says: ‘This new journal will have a specified focus on clinical cardiovascular pharmacology. The production of papers within this area is enormous; in Medline there are almost 500,000 references to the search term “cardiovascular pharmacology” and the publication tendency in this field appears to be steadily increasing. Despite this fast development we need even more data from pharmacology studies aimed at improving prognosis for cardiovascular disease while it remains the most common cause of death world-wide’.

Agewall believes that being part of the *EHJ* family will set the new publication apart. ‘We have seen that the concept of creating a family of journals with one strong “mother-journal” has been successful. Apart from the *EHJ*, both *Circulation* and *JACC* have used the same idea in a very successful way. Currently, the *EHJ* rejects almost 90% of submitted papers and several of those refer to cardiovascular pharmacology. The *EHJ* family has a transfer system which means that papers can be transferred from one journal to another within the family which is a good way of picking up those good papers which do not fit into the main journal’.

The style of the papers submitted to the journal will be the same as the one used by the *EHJ* which will make it easier to transfer papers between the ‘family’ of journals. A contract with Oxford University Press, who will act as publisher of the journal, has recently been signed.

The overall aims of the new journal include:

- improving the pharmacological treatment of patients with cardiovascular disease;
- interpreting and integrating new scientific developments within this area;
- publishing high-quality original research and reviews;
- establishing a fast peer review system;
- creating a rapid online publication process; and
- establishing a high profile.

Planning and production started in the early months of 2014 with full support from the current ESC Board and editor-in-chief of the *EHJ*, Thomas Lüscher. A launch issue of the Journal was available during the ESC Congress in Barcelona in August this year.

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Subsequently, 2015 will see four issues. The number of issues will gradually increase yearly, and monthly publication should be a goal within 5 years.

Working alongside Agewall will be some highly recognized and respected editorial board members from all over the world, including: Jeroen J. Bax, Deepak L. Bhatt, Eugene Braunwald, John Camm, John J.P. Kastelein, Gregory Lip, Lionel Opie, Freek W.A. Verheugt, Fausto Pinto, Bertram Pitt, Philippe Gabriel Steg, Harvey White, José Luis Zamorano, Faiez Zannad, and several others. Dan Atar, Keld Kjeldsen, and Basil Lewis will serve as associate editors of the journal. Agewall says: ‘We feel very honoured and proud that so many busy and well-respected colleagues want to work with the new journal’.

The journal will invite prospective authors to submit their work starting in September 2014. The editors look forward to contributions from all parts of the world.

What does the future hold for Mayo Clinic?

Dr Chet Rihal, MD MBA, Chair of the Division of Cardiovascular Diseases, and William S. and Ann Atherton, Professor of Cardiology, discuss what the future holds for Mayo Clinic

Dr Rihal said that it is not difficult to predict general trends in terms of disease states: chronic systolic and diastolic heart failure, arrhythmia, chronic ischaemic heart disease with ischaemic cardiomyopathy, and chronic valvular heart disease.

‘Those conditions will probably form the majority of patients we see’, he added. ‘We can predict what type of disease states we will be asked to treat in the future and simultaneously there are very exciting innovative therapies being developed, for example, regenerative medicine—stem cell therapy for chronic heart failure. We are testing these exciting new innovations and we have percutaneous deliverable heart valves that we are using in clinical practice’.

Clearly says Dr Rihal, there is a lot to do in cardiology with patients in their 70s and 80s who are better informed than ever before; an important consideration is the need to take their desires and wishes into account and ensure they are fully informed as to their treatment options.

‘I personally feel that interaction with geriatricians, palliative care specialists and using shared decision-making with patients and their families is going to become increasingly important in future years as we deal with older patients’.

Within the USA, some healthcare systems are buying up hospitals and other healthcare systems around the country; however, Mayo Clinic has not followed that route, instead it establishes relationships with its affiliated practice networks with other hospitals and healthcare systems.

‘We are establishing professional relationships. For example, if a patient comes to us from the Chicago area, we will work with partners in Chicago so that we can assess the patient before they ever get here using electronic means either through e-consult, telemedicine, or simply having a discussions with referring physicians’, said Dr Rihal.

‘We can then mutually decide whether or not the patient needs to come to the tertiary care centre and having done so, then we can
work with our partners in these other states on the follow-up of these patients’.

The goal for Mayo, by forming partnerships rather than expanding its number of centres, is to establish linkages with healthcare systems in every state in the Union.

‘We will have to see how this strategy works but the early signs are quite encouraging’, he said.

Issues, such as increasing costs, government restrictions, and cutbacks on reimbursement, are inevitably having an impact, with the Mayo Clinic acknowledging that it expects up to a 20% reduction in reimbursement, but Dr Rihal believes that this is driving Mayo Clinic to work more effectively and efficiently.

However, he points out that such a concern is nothing new.

‘Dr Bruce Fye, who is one of our cardiologists and a medical historian, shared some very interesting minutes with me from the 1930s from Mayo Clinic board of governors meetings’, explained Dr Rihal. ‘They were discussing increased costs and decreasing reimbursement, particularly as we were going into the Depression years. For decade after decade, healthcare systems have wrestled with these issues but right now it is true that Mayo and every healthcare system in the United States is concerned about the potential decrease in their reimbursements’.

If Mayo Clinic is to sustain its operations and continue to provide high-quality care, it has to learn to work differently, according to Dr Rihal, and that involves embracing the concept of team-based care.

Rather than the consultant seeing every patient individually, he or she becomes the leader of a team that may include a cardiology trainee, nurse practitioners, or physician assistants, with that care team looking after a panel of patients. This has already been implemented in Mayo’s heart failure and electrophysiology practices.

‘Not only is it a more cost-efficient model but I think it is a better model’, said Dr Rihal. ‘We can actually improve access and communication and rather than being the data gatherer and synthesiser and executor of the plan, the consultant becomes the leader, rather than solely a physician, and focuses on the complex medical decision-making’.

As a resource-intensive specialty, cardiology is always under scrutiny and has to be more accurate and efficient, particularly in areas such as cardiac imaging, as pressure mounts on reimbursements.

But Dr Rihal said: ‘I believe decreasing reimbursements will actually drive improvement in quality since greater emphasis will be placed on value rather than just volumes. It is going to be a challenging time and we are definitely going to need to learn to work differently. But I hope we can work better as we work differently’.

Despite declines in smoking rates, the number of smokers and cigarettes smoked rises

Population growth since 1980 drives increases in countries including China and Russia, while Canada, Mexico, and the USA see strong declines

Globally, smoking prevalence—the percentage of the population that smokes every day—has decreased, but the number of cigarette smokers worldwide has increased due to population growth, according to new research from the Institute for Health Metrics and Evaluation (IHME) at the University of Washington.

The study ‘Smoking Prevalence and Cigarette Consumption in 187 Countries, 1980–2012’ was published on 8 January 2014 in the Journal of the American Medical Association in a special issue devoted to tobacco.

Overall, age-standardized smoking prevalence decreased by 42% for women and 25% for men between 1980 and 2012. Four countries—Canada, Iceland, Mexico, and Norway—have reduced smoking by more than half in both men and women since 1980.

But substantial population growth between 1980 and 2012 contributed to a 41% increase in the number of male daily smokers and a 7% increase for females. In 2012, smoking prevalence among men was higher than for women in all countries except Sweden. More than 50% of men smoke every day in several countries, including Russia, Indonesia, Armenia, and Timor-Leste. Smoking prevalence for women was >25% in Austria, Chile, and France and >30% in Greece, among the highest percentages in the world. The lowest smoking rates for men can be found in Antigua and Barbuda, Sao Tome and Principe, and Nigeria. For women, smoking rates are lowest in Eritrea, Cameroon, and Morocco.
Countries with the highest and lowest smoking rates for men in 2012

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<tr>
<th>Highest</th>
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<tr>
<td>Timor-Leste 61.1%</td>
<td>Antigua and Barbuda 5%</td>
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<td>Indonesia 57%</td>
<td>Sao Tome and Principe 7%</td>
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<tr>
<td>Kiribati 54.4%</td>
<td>Nigeria 7.5%</td>
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<tr>
<td>Armenia 51.7%</td>
<td>Ethiopia 7.7%</td>
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<tr>
<td>Papua New Guinea 51.4%</td>
<td>Ghana 8.2%</td>
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<td>Laos 51.3%</td>
<td>Sudan 8.2%</td>
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<tr>
<td>Russia 51%</td>
<td>Dominica 8.4%</td>
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<tr>
<td>Cyprus 48%</td>
<td>Niger 8.8%</td>
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<tr>
<td>Macedonia 46.5%</td>
<td>Suriname 9.8%</td>
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<tr>
<td>Tonga 46.4%</td>
<td>Ecuador 10.3%</td>
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Countries with the highest and lowest smoking rates for women in 2012

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<th>Highest</th>
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<tr>
<td>Greece 34.7%</td>
<td>Eritrea 0.6%</td>
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<tr>
<td>Bulgaria 31.5%</td>
<td>Cameroon 0.6%</td>
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<tr>
<td>Kiribati 31.3%</td>
<td>Morocco 0.7%</td>
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<td>Austria 28.3%</td>
<td>Gambia 0.8%</td>
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<td>France 27.7%</td>
<td>Libya 0.9%</td>
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<td>Macedonia 26.7%</td>
<td>Oman 0.9%</td>
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<td>Belgium 26.1%</td>
<td>Algeria 0.9%</td>
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<td>Chile 26%</td>
<td>Azerbajian 0.9%</td>
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<td>Hungary 25.8%</td>
<td>Ethiopia 1.0%</td>
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<td>Andorra 25.2%</td>
<td>Sudan 1.0%</td>
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These differences persist despite decades of strong tobacco control measures globally. Fifty years ago, the first US Surgeon General’s report on the health impact of smoking led to groundbreaking research on tobacco and investments by governments and non-profit agencies to reduce tobacco prevalence and cigarette consumption. In 2003, the Framework Convention on Tobacco Control (FCTC) was adopted by the World Health Assembly and has since been ratified by 177 countries.

‘Despite the tremendous progress made on tobacco control, much more remains to be done’, said IHME Director Dr. Christopher J L Murray. ‘We have the legal means to support tobacco control, and where we see progress being made we need to look for ways to accelerate that progress. Where we see stagnation, we need to find out what’s going wrong’.

According to the most recent figures from the Global Burden of Disease (GBD) study, coordinated by IHME, tobacco led to 5.7 million deaths, 6.9% of years of life lost, and 5.5% of total health loss around the world. These estimates exclude the health effects from second-hand smoke.

Institute for Health Metrics and Evaluation arrived at its estimates based on a wide range of data sources, including in-country surveys, government statistics, and World Health Organization data. Previous estimates typically have focused on fewer data sources.

The greatest health risks for both men and women are likely to occur in countries where smoking is pervasive and where smokers consume a large quantity of cigarettes. These countries include China, Ireland, Italy, Japan, Kuwait, Philippines, South Korea, Switzerland, Uruguay, and several countries in Eastern Europe. The number of cigarettes smoked around the world has grown to >6 trillion. In 75 countries, smokers consumed an average of >20 cigarettes per day in 2012.

‘Tobacco control is particularly urgent in countries where the number of smokers is increasing’, said Alan Lopez, Laureate Professor at the University of Melbourne. ‘Since we know that half of all smokers will eventually be killed by tobacco, greater numbers of smokers will mean a massive increase in premature deaths in our lifetime’.

There have been three phases of global progress in reducing the age-standardized prevalence of smokers: modest progress from 1980 to 1996, followed by a decade of more rapid global progress, and then a slowdown in reductions from 2006 to 2012. This was in part due to increases in the number of smokers since 2006 in several large countries, including Bangladesh, China, Indonesia, and Russia.

Annualized rate of change captures the relative reduction in smoking prevalence, and several countries had notable declines of 2% or more between 1980 and 2012. For men, annualized rates of decline of 2% or more occurred in 17 countries, with the greatest rates of decline observed in Canada, Iceland, Mexico, Norway, and Sweden. For women, annualized rates of decline >2% were achieved in 22 countries. Bolivia, Canada, Denmark, Iceland, Israel, Norway, Sweden, and the USA all had prevalence rates in 1980 >20% but achieved annualized rates of decline of >2%. In a disturbing trend, Austria, Bulgaria, and Greece all had prevalence rates >20% in 1980 and have shown statistically significant increases since then.

‘Change in tobacco prevalence typically has been slow, underscoring what a hard habit it is to break’, said Emmanuela Gakidou, Professor of Global Health and Director of Education and Training at IHME. ‘But we know from these global trends that rapid progress is possible. If more countries were able to repeat the success we have seen in Norway, Mexico, and the United States, we would see much less health loss from smoking’.

‘Globally, there has been significant progress in combating the deadly toll of tobacco use’, said Matthew L. Myers, President of the Campaign for Tobacco-Free Kids in response to the paper. ‘These findings demonstrate both that where countries take strong action, tobacco use can be dramatically reduced and the devastating consequences when countries do not fully adopt and implement effective tobacco control measures’.

The study is available at: http://jama.jamanetwork.com/article.aspx?articleid=1812960

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Andras Tofield
Christopher J.L. Murray, MD, DPhil, is Professor of Global Health at the University of Washington, USA, and Institute Director of the Institute for Health Metrics and Evaluation. A physician and health economist, his work has led to the development of a range of new methods and empirical studies to strengthen the basis for population health measurement, measure the performance of public health and medical care systems, and assess the cost-effectiveness of health technologies. Institute for Health Metrics and Evaluation is focused on the challenges of measurement and evaluation in the areas of health outcomes; health services; financial and human resources; evaluations of policies, programs, and systems; and decision analytics.

Dr Murray is a founder of the Global Burden of Disease (GBD) approach, a systematic effort to quantify the comparative magnitude of health loss due to diseases, injuries, and risk factors by age, sex, and geography over time. He led the collaborative of almost 500 researchers from 50 countries that produced the Global Burden of Diseases, Injuries, and Risk Factors Study 2010 (GBD 2010). This latest iteration of the effort generated nearly 1 billion estimates of health outcomes for 187 countries and 21 regions, and was published in The Lancet in December 2012.

In his earlier work, Dr Murray focused on tuberculosis control and the development with Dr Alan Lopez of the GBD methods and applications. As part of this work, they developed a new metric to compare death and disability from various diseases and the contribution of risk factors to the overall burden of disease in developing and developed countries. This pioneering effort continues to be hailed as a major landmark in public health and an important foundation for policy formulation and priority setting.

From 1998 to 2003, Dr Murray worked at the World Health Organization (WHO), where he served as the Executive Director of the Evidence and Information for Policy Cluster while Dr Gro Harlem Brundtland was Director-General. He went on to become Director of the Harvard University Initiative for Global Health and the Harvard Center for Population and Development Studies, as well as the Richard Saltonstall Professor of Public Policy at the Harvard School of Public Health, from 2003 until 2007.

Dr Murray has authored or edited 14 books, many book chapters, and 200 journal articles in internationally peer-reviewed publications. He holds Bachelor of Arts and Science degrees from Harvard University, a DPhil in International Health Economics from Oxford University, where he was a Rhodes Scholar at Merton College and a medical degree from Harvard Medical School.

A patient’s dilemma: mitral regurgitation—to operate—or medical management?

A personal view of a difficult decision by a retired professor of medicine in the Netherlands, Dr Shiva Shivananda

Introduction

Primary degenerative mitral regurgitation (MR) is associated with substantial risk of heart failure and death. Practice guidelines recommend—repair or replacement surgery—for patients with severe forms of this condition. However, supporting evidence for surgery remains controversial.

I was diagnosed with mitral incompetence in December 2010—at a cardiology unit in Jodhpur-Rajasthan-India. An echocardiogram showed severe MR and was treated with furosemide (20 mg) and spironolactone (25 mg) daily. On returning to the Netherlands—I made contact with the cardiology unit of the District General Hospital (DGH) in Leiden. A new echocardiogram confirmed the presence of severe MR (grade 3–4) and showed slightly diminished left ventricular (LV) systolic function.

A staff cardiologist (W.T.) at this hospital informed me that there is a chance of supra-ventricular arrhythmia or congestive heart failure and that surgical repair should be performed. He advised me to undergo the required diagnostic tests for surgery.

Second opinion

Given my age of 82 and other risk factors such as, coronary by-pass graft (CABG), I was not convinced that a surgical option was the best way forward. I therefore went for a second opinion at the Leiden University Medical Center (LUMC), a 'centre of
excellence’ for the treatment of many diseases and conditions in the Netherlands.

I met with a highly respected senior cardiologist (J.W.J.) who ordered a trans-oesophageal-echocardiogram and cardiac catheterization to measure pulmonary pressure. These showed severe MR (grade 3–4), mitral valve prolapse, and dilatation of the left atrium. However, there was no evidence of LV dilatation and its functional capacity was reasonable. Cardiac catheterization showed normal pulmonary pressure.

In contrast to the staff cardiologist at the DGH—who readily suggested a surgical option—the cardiologist at the LUMC asked me if I would prefer medical management or the surgical option. At my request—he arranged for me to consult a senior and highly respected cardiac surgeon (R.K.) at the medical centre for a balanced view—of the probable risks for either option. R.K. has an international reputation in MV conservation.

Surgical option

After reviewing my medical data, R.K. thought that repair of the MV was the best option. In his view, the success of surgical repair was 90–95% and the risk associated with surgical intervention was low, despite my age. In his opinion—it is the biological age and not the calendar age that is crucial to the surgical outcome. He further suggested that surgical repair could extend my life another 5 years and offer an improved quality of life (QOL).

However, the published data on patients with primary, degenerative MV disease treated at this surgical unit was limited.

My review of the literature showed a mixed bag of controversial data.2–5 Besides showing improved QOL and functional capacity as measured by NYHA (New York Heart Association) functional classification—the published data also show evidence of complications, high risk of operative and post-operative mortality, renal failure, re-operation, and repeat hospitalizations. Age and presence of (CABG), expose patients to a higher risk of complications.

In the absence of randomized trials comparing the outcomes of MV surgery to medical therapy, clinical decision-making regarding surgery for patients with severe degenerative disease MR poses a real dilemma to a thoughtful clinician.

This was vividly brought home to me in a second consultation I had with a junior thoracic surgeon and anaesthetist at the same surgical unit at the LUMC. They informed me that given my history of CABG—surgical time would be 8 h or more. The anaesthetist bluntly highlighted the risk of possible complications. This included stroke, renal failure, possible re-operation and the risk of operative or post-operative mortality. He then asked—do you still want to go for the surgical option?

This ended my quest for a surgical option. It was an intense exchange of views between the surgical team on risk assessment and myself that showed high standards of ethical concern for patient welfare at the cardiothoracic surgical unit.

I am fully aware that mechanical problems require mechanical solutions—but given the above-mentioned uncertainties, I have chosen the pharmacological option (furosemide 20 mg/isosomonret 60 mg, daily). On the NYHA functional Index—I will fit in class 2.

I can live with slight limits to my activity!

Medical decision-making

None of us has the gift of seeing into the future. But we do know that making the right medical decision is becoming harder and harder. The message here is, when doctors are faced with a high-risk medical decision they should encourage patients to seek a second opinion, if possible, at a centre of excellence.

This will strengthen the medical mind of patients and will help them make a decision they can live with.

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References