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### Tackling Coronary Heart Disease the Biggest Success in 50 Years



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## Interview with Professor Guy de Backer

Professor Guy De Backer, Emeritus Professor at Ghent University, Belgium, will be a keynote speaker at the ESC Conference in Rome on August 27-31, delivering the ESC Geoffrey Rose Lecture on Population Sciences on “Epidemiology and Prevention of Cardiovascular Diseases: Quo Vadis?” Prior to the conference, he gave an interview to HealthManagement.org about the past, present and future of cardiology, where he reflected on perceptions and personal experiences working as a cardiologist in a western society. His research domain has been cardiovascular epidemiology and prevention, while, as a clinician, Prof. De Backer has been working in noninvasive cardiology and in particular in cardiac rehabilitation.

### **How different is cardiology today from 50 years ago? What would you say are the biggest achievements in this discipline –the human learning or the technology side?**

The cardiological discipline has changed tremendously over the past 50 years. I started my cardiology training in 1968. At that time, we used our clinical experience, electrocardiography, phonocardiography, x-rays and a few biochemical measurements. Patients suffering from an acute myocardial infarction (AMI) were treated with bed rest, pain relief, oxygen and monitoring; most of them were kept in hospital for 4-6 weeks. The rate of return to work was less than 50 percent. Nowadays, an acute myocardial infarction (AMI) can still be very serious, but most uncomplicated cases are discharged after a few days, and return to work is over 85 percent. This is just one example of changes that took place on the basis of better knowledge, better treatments and societal changes.

Personally, I think that the greatest achievement in cardiology has been the reversal of the epidemic of coronary heart disease (CHD ) that started after World War II. In most western European countries,

we have been able to reduce CHD mortality by more than 50 percent over the last 30-40 years. A large proportion of the gain in life expectancy that we have observed in the past 30 years is due to fewer cardiovascular deaths.

More than half of that gain—and in some countries such as Finland up to 70 percent of the reduction of CHD mortality— is related to prevention and the rest to better treatments.

Prevention means in the first place smoking cessation and, a balanced healthy diet and physical exercise. Unfortunately, in more recent years, we have seen a growing epidemic of obesity and type 2 diabetes, important risk factors for CHD ; the gain in CHD mortality that we observed mainly in the 1980s and 1990s seems to have slowed down in recent years.

CVD prevention is possible and has worked and this is not on the basis of new technologies, but due to better insights into pathogenesis, epidemiology and CVD risk factors. One of the main challenges nowadays is the implementation of that scientific knowledge into practice, a challenge for society including cardiologists and their societies.

But cardiology has also gained a lot from discoveries in the field of pharmacology and medical devices. The latter has led us to a discipline with a different kind of 'super-specialist', dealing exclusively with electrophysiology, percutaneous coronary intervention (PCI), percutaneous aortic valve replacement (PAVR), support devices etc.

These developments are fascinating and very welcome, but in terms of "what is best?" they should not be balanced against prevention or noninvasive approaches. The trend towards a more personalised medicine is welcome in this respect; each patient should be considered on his own and the best approach for their personal problem should be offered on the basis of expert opinion from a team of cardiologists in dialogue with the patient. All these different approaches should also receive sufficient support for further research and development.

For noninvasive cardiologists, one of the challenges is that within an actual generation we have prevented premature CVD mortality and disability-adjusted life years (DA LYs), but the result is more a postponement than a complete prevention; this has resulted in an epidemic of more advanced clinical entities of atherothrombotic cardiovascular disease (CVD) in the elderly and in the very old, such as heart failure and vascular dementia. This requires more care than cure and will increase healthcare costs.

### **Where would you like to see new achievements in the next few years?**

For the immediate future, I think that we need more research on preventive strategies, a shift from aetiological research into preventive research. We need to know how to overcome the barriers for the implementation of prevention guidelines into daily clinical practice. At the level of the individual patient we hope that epidemiological research will help us in understanding the complex interactions between the genome and the environment. This could help us in identifying novel targets for a more personalised preventive strategy.

### **How important is multidisciplinary teamwork in cardiac rehabilitation?**

Cardiology has always required teamwork and in the field of CVD rehabilitation this is even crucial.

In my experience in the cardiac rehab unit in Ghent University Hospital, the social nurse was the key player in identifying in a given patient the problems that affected his or her quality of life. Based on that information, the whole team was responsible for relieving these problems in order to achieve the most optimal results for that patient. The same is true for the management of patients with chronic heart failure, where the 'heart failure nurse' is in a key position to coordinate the efforts made by the cardiologist, the family doctor, the dietician and the physiotherapist. It is probably true that what the cardiologist has said to the patient may be differently perceived by the patient than what comes from the other team members; therefore it is crucial that all team members know what message to give and what goals to reach.

### **How important has the European Society of Cardiology contribution been to improving quality of healthcare, technological development and also education of young cardiologists?**

The European Society of Cardiology (ESC) has played a major role in bringing cardiologists together in Europe. In the 1960s and 1970s, European cardiologists went mostly to the scientific meetings of the American Heart Association and the American College of Cardiology; these meetings are still of great interest, but the meetings of the ESC and affiliates (associations, councils, working groups, etc.) have improved tremendously and attract more and more attention in Europe and globally. Initially, we met mainly to discuss study results and to exchange experiences; this has expanded to other aspects related to education, continuing medical education, research, guidelines, surveillance, networking and international collaboration.

### **What do you see as the biggest healthcare problem in Europe today?**

It is hard to identify 'the biggest health problem in Europe today'. It depends on how you define health in the first place. Personally, I feel that we have failed in decreasing social inequalities in health, and this is also true within the field of cardiology. We have been successful in decreasing CVD mortality in all classes of society, but the social differences that existed already years ago have not diminished.

### **How important is it to have both public and private healthcare? Which one is more efficient?**

Healthcare is responsible for a large proportion of the gross national product in most societies in Europe and public money should be spent as efficiently as possible. Different healthcare systems have been tested in Europe; they all have advantages and limitations. We should learn from each other. Good management of large departments in university hospitals that are responsible for teaching, medical care and research is very important and this requires the input of a team of experts from different disciplines.

### **If you had not become a cardiologist, what would you be today?**

In my experience the choice of a professional career is not influenced by inspiration but mainly by circumstances. I never thought of doing something else. I have had the great privilege of working in almost ideal circumstances, in a community free of war and catastrophes, doing a job that I loved with a family that gave me a maximum of opportunities. I do not believe in reincarnation. So that will be it.

## Key Points

- The greatest achievement in cardiology has been the reversal of the of coronary heart disease (CHD) epidemic that started after World War II.
- Prevention of CHD means in the first place no smoking of tobacco, a balanced healthy diet and physical exercise. Unfortunately in recent years the prevalences of obesity and of type II diabetes have increased and counteract what has been gained in the 80s and 90s.
- CVD prevention has worked, not on the basis of new technologies, but on better insights into pathogenesis, epidemiology and good management of CVD risk factors.

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