The development of new evidence based diagnostic methods, drugs, interventions and medical devices in the cardiovascular field in general, and in acute myocardial infarction (AMI) in particular, has been dramatic the last 30 years. During the same period a substantial decrease in the mortality after AMI has been noted in most western countries, including Sweden. This could partly be explained by the adoption of new and better diagnostic methods and treatments. Attributes of the care system, such as organisational culture (e.g. flexibility and willingness to change), care pathways and type of financial incentives play an important role for the adoption of new methods and therapies. However, changes in risk factor patterns in the general population seem equally important for explaining the decrease in mortality. Thus, these facts emphasize the importance of a comprehensive strategy that promotes development and implementation of evidence-based medical methods and treatment measures as well as measures to improve public health (primary prevention). It also means that outcome measures such as mortality after AMI, do not only reflect the performance of the health care system but also reflect the general public health.

In international comparisons of care, the results of Swedish care for AMI usually ranks among the best; Sweden together with Denmark had the lowest in-hospital mortality after AMI (year 2007) among 8 OECD countries, including United States and the UK. In a recent unique study comparing the short-term outcome after AMI in Sweden and the UK, the crude 30-day mortality was 7.6 % in Sweden and 10.5 in the UK. In an attempt to isolate the effect of differences in the health care, case-mix adjustments were made for a long list of background factors. After adjustment, the short-term mortality rate was still 37% higher in the UK, corresponding to more than 11,000 excess deaths. Furthermore, significant differences in the use of evidence-based treatments between the two countries were found. The authors suggested that the difference in outcome is due largely to the divergent speed of implementation of policy initiatives to improve care.

Against this background, I will briefly discuss a few issues characterizing the Swedish cardiac care. In order to have good results on a national level, the care must be available for all inhabitants. Equal access to care regardless of socioeconomic status is a corner stone in the Swedish health care system. Despite that, there are still differences in the uptake of secondary prevention measures after AMI, e.g. use of ACE-inhibitors are lower in those with lower income.

There has been a rapid decrease in regional variation in the acute care of AMI in Sweden over the last 10-15 years; today the regional variations are relatively small with a homogeneous uptake of evidence based therapies. The reasons for this positive development are clearly multifactorial. One factor is the nationwide quality registries, strongly founded in the professions. The Swedish Web-system for Enhancement and Development of Evidence-based care in Heart disease Evaluated According to Recommended Therapies (SWEDHEART) measures both processes and results, with transparent and public reporting of the results on hospital level. The public reporting has highlighted the regional differences and created a positive competition within the professions and among the care givers to provide the best care. In order to even further stimulate development of the health care in Sweden there is a ranking between hospitals performed by the independent news magazine for health care, Dagens Medicin. In this yearly ranking, registry and enquiry data about quality of care (treatment targets), patient safety, implementation of evidence-based methods, cost effectiveness and patient satisfaction are aggregated. For cardiac care among university hospitals the Heart Centre in Umeå has achieved the top ranking the last two years giving their staff positive feedback to carry on and the other university hospitals incentives and targets to improve.

During the last two decades the international quality improvement movement has influenced the Swedish health care system, providing new insights in the science of quality improvement and providing tools for the application in clinical practice. Quality improvement methods have successfully been used to improve the AMI care in Sweden.

The Swedish guidelines for cardiac care from The National Board of Health and Welfare provide an evidence-base for different treatments and simultaneously prioritize the treatments based on the severity of the underlying disease state and the effectiveness (including cost effectiveness) of the treatment. The guidelines have created a pressure on all care-givers to provide the top prioritized treatments and diagnostic procedures; and to measure the implementation of these treatments and procedures. Finally, the strong tradition of wide spread participation in clinical research have played a role, e.g. for the rapid general uptake of an invasive strategy in non-ST-elevation acute coronary syndromes, and new antithrombotic agents.

The Swedish health care system, together with most of the western world, faces many challenges in the future. The rapid increase in fundamental biological knowledge and the technological development cause an increasing gap between what we can do (diagnostically and therapeutically) and the available resources; and create a strong pressure to prioritize measures that maximize the value (effect in relation to cost) for the patients. Therefore, it is fundamental to have well trained physicians and nurses and to secure that they are able to constantly up-date their knowledge and skills, implement new evidence based treatments and procedures and remove old obsolete methods. It is also fundamental that the whole healthcare system participates in generation of new knowledge and innovations; clinical research must be part of the core business of the health care system. The decreasing participation in clinical trials seen in Sweden over the last 10-15 years are therefore worrisome. The care givers must optimize the way care is delivered, which might imply that some care must be more disseminated in order to achieve widespread access, and other very specialized care must be more concentrated to few places in order to secure the highest quality and cost-effectiveness.

However, to continue the successful lowering of the incidence of
ischemic heart disease as well as mortality after AMI, measures on a societal level to promote a healthier lifestyle must continue, such as further decrease the use of tobacco, lower the intake of sugar and other unhealthy food, and increase of regular physical activity. The real challenge is to reach all parts of the society, also to those with less capability or less motivation to change their lifestyle. The tremendous success of the last 30 years is encouraging, let us work together so that the next 30 years will be equally successful in the battle against coronary artery disease and other heart diseases.

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References

Malta Cardiology

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The Maltese Cardiac Society was founded in 2007 and is a member of the European Society of Cardiology. The objective of the society is to enhance knowledge regarding the cardiovascular system and circulation amongst physicians and cardiologists. The society is responsible for the specialisation of medical doctors in cardiology following completion of basic training in general medicine. To this extent, the society organises regular educational activities. These include weekly Heart Team meetings whereby cardiologists and cardiothoracic surgeons discuss challenging cases involving coronary and/or valvular heart disease; Journal Clubs whereby original articles, systematic reviews and meta-analysis recently published in international peer-reviewed journals are presented and discussed; and Mortbidity & Mortality meetings whereby cases with peri-procedural complications are presented amongst cardiologists, cardiothoracic surgeons and trainees and critically analysed with the intention of improving outcomes in our patient population. Lectures on interpretation of electrocardiograms, management of arrhythmias and pacing are also carried out on a weekly basis as part of postgraduate medical education. In addition, interesting cases and/or guidelines are discussed in a dedicated session carried out on a two-weekly basis.

Promotion of cardiac research is an important target for the Maltese Cardiac Society. In fact, a significant number of cardiologists, cardiothoracic surgeons as well as trainees have or are currently conducting research either at Master or Doctoral level. Despite the limited resources, members of the society have managed to publish research articles in international journals. Furthermore, the society organises an annual conference whereby research carried out in the Departments of Cardiology is presented; state-of-the-art lectures are also delivered during the conference by international speakers. The next conference will be held between the 17th and 18th October, 2014; the focus of this year’s conference will be prevention of cardiovascular disease.

The current President of the Maltese Cardiac Society is Dr. Robert George Xuereb who is also Chairman of the Department of Cardiology. Dr. Xuereb graduated as medical doctor from the University of Malta and started his training in the local university hospital. Consequently, he continued his training in Cardiology at San Raffaele Scientific Institute, Milan, Italy. His main interest is Interventional Cardiology. Dr. Xuereb is a Fellow of the European Society of Cardiology and the American College of Cardiology. His objective is to enhance research and medical education in the Society as well as raising the standard of care provided in order to optimise clinical outcome of patients suffering from cardiovascular disease.

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