MEP HEART GROUP FOR CARDIOVASCULAR HEALTH WEEK
"MIND YOUR HEART – FOR A HEART HEALTHY EUROPE"

INVESTING IN HEALTH:
BETTER & SAFER TREATMENTS FOR EUROPEAN CARDIOVASCULAR PATIENTS

THURSDAY 7 NOVEMBER 2013 · 11:00 – 13:00
EUROPEAN PARLIAMENT, BRUSSELS · ROOM A3H1

Meeting Report

The meeting, which was one of the many events of the Mind your Heart week organised by the MEP Heart Group, was chaired by Ms Marian Harkin MEP. The objectives of the meeting were to learn from innovative examples of investment in care and treatment but also from research projects in the area of cardiology, which will result in tangible benefits for the European population.

Introduction

Ms Marian Harkin MEP welcomed colleagues and participants by saying that the current financial crisis across Europe and subsequent regimes of austerity pose a substantial and worrying threat to society's health by putting additional pressure on already overstretched health systems. Indeed, if the current level of diseases in these age groups would remain, many millions more Europeans would suffer from serious disorders including cardiovascular diseases (CVD), which:

- remain the n.1 killer in the EU, with over 1.9 million deaths each year
- are estimated to cost the EU economy €196 billion a year, around 54% of which is due to health care costs and 24% due to informal care of people with CVD
- are prevalent at an older age.

The severe burden of CVD for the EU society and economy, as well as the aspirations to an Innovation Union guaranteeing improved lives and a better society for EU citizens, represent an obvious call for the discovery and deployment of innovative solutions, which have the potential to provide high-quality and safe personalised healthcare, while increasing the efficiency and sustainability of care systems in the EU.

Ms Harkin MEP encouraged participants to engage in a dialogue around the presentations of many innovative ideas on how to address CVD, which could actually prove both of benefit for the patient and for health care systems.

Introducing Horizon 2020

Dr Virginija Dambrauskaite from the European Commission's Directorate General for Research of the European Commission, started her presentation by giving an overview of cardiology projects which were funded by the current European Union funding instrument for research, the 7th Framework Programme. 317 projects were funded, representing a total of €960 million, €732 million of which come from the European Union, covering the 2007-2012 period. 80% of the funding dedicated to cardiovascular diseases went to translational research.

Horizon 2020, the next multiannual financial framework, will cover the 2014-2020 period. It will be simplified and will allow broader access, will strive to couple research to innovation and will focus on societal challenges. The basic principles will remain scientific excellence, European added value, transnational cooperation, public calls, pear review evaluation, competitive selection cost sharing and openness to international cooperation.

The 3 priorities will be as follows:

- Excellent science, representing approximately a third of allocated budget, with instruments such as the European Research Council, Future and Emerging Technologies, Marie Curie Actions and Research Infrastructures
- Industrial leadership (approx 22% of the budget), including leadership in enabling and industrial technologies and innovation in SMEs.
- Societal challenges, with approximately 38% of the budget, which will include health research.

Horizon 2020 will work in partnership with other funding instruments, among which the Public Private Partnerships and the European Innovation Partnerships, in which health is addressed, for example with the European Innovation Partnership on Active and Healthy Ageing or the Innovative Medicine Initiative (IMI).

Horizon 2020 was designed to address the context of demographic change, increase of the burden of non communicable diseases and raising health care costs. Dr Dambrauskaite concluded in listing the health priorities:

- Understanding health, well being & disease
- Preventing disease
- Treating and managing disease
- Active ageing and self management of the disease
- Methods and data

» Health care provision and integrated care

Comparative effectiveness research (and education) in cardiovascular imaging

Prof Danilo Neglia, Professor in "Innovative Strategies in Biomedical Research" in Pisa, researcher and clinician, explained that the increase of cardiovascular imaging solutions resulted in a related explosion of costs, which would not be bearable for health systems. The EVINCI project, which was funded by the European Union's 7th Framework Programme Research, was aiming at detecting the most effective imaging strategy to diagnose significant coronary heart diseases, hence reducing the duplication of imaging techniques and related costs. EVINCI brought together 50 researchers from 9 EU countries, who demonstrated that CT coronary angiography (CTCA) is more accurate than other imaging techniques and that functional or combined anatomical-functional strategies are more cost-effective in identifying patients with high risk who deserve revascularisation.

The EVINCI findings were translated in educational messages which were widely disseminated through the usual continuous medical education tools and in particular on the educad.org website.

Professor Neglia demonstrated that the latest technology should not be used at all costs but should be used based on cost effectiveness, to restrain unnecessary or inefficacious growth of imaging technology utilisation. Comparative Effectiveness Research is critical to identify the strategies that provide the greatest incremental value on patients' outcome.

CardioScape: mapping & representation

Sophie O'Kelly, head of the European Society of Cardiology European Affairs, introduced the CardioScape project, another FP7 project led by the European Society of Cardiology, along with project partner PNO Consultants (UK). CardioScape is a survey of the European CVD research landscape, from which expert opinion can guide investment into identified research gaps, highlight areas where coordination could be improved and help prioritise future research. The project started in November 2012 and is expected to last 18 months.

The inventory of research projects related to cardiovascular diseases mobilised the whole cardiology community, from the Presidents of the 28 EU member states' national cardiac societies to their research experts, in identifying the major funding organisations for each country. Research projects will be publicly accessible through an online database which will contain information on research projects ran in 2010, 2011 and 2012 for a total budget over EUR 100,000. In parallel, PNO consultants searched all possible funding schemes in Europe and their report will be soon made available.

Such information will feed the reflection and discussion of all stakeholders of the cardiology community, academia, patients, industry players including SMEs, policy makers, etc to agree on a set of recommendations for future priorities for funding of CVD research in Europe.

Involvement of patients in research

Ms Daphne Bloemkolk from De Hart en VaatGroep, a Dutch Cardiovascular Patients Organisation, shared with the audience her vision of the crucial role of patients in research for the progress of medicine. The rationale is that patients, their partners and children know best what the bottlenecks of living with CVD are. Their knowledge is valuable to improve the quality of research. It is not only logical to involve the "end users" in the research project, it will also results in increasing the legitimacy of research.

Solutions to involve patients in research include the selection and training of patients in research skills and vocabulary, but also their involvement as research partners. They might receive a small free for compensation and will feel responsible for the implementation of the outcome. Concrete examples exist across Europe and validate the added value of patients in research projects.

The second session of the meeting looked at innovative approaches, developed, tested and implemented by representatives of the cardiology community in Europe. These demonstrate that investments, in these times of budget constraints, are actually cost-effective, and benefit both the patients and the whole medical community, including health care systems.

A patient-centered approach towards health care sustainability

Professor Zamorano, from the University Hospital Ramon y Cajal in Madrid, opened this second session with a very concrete example of reorganising a hospital unit to make it clinically and financially profitable. The re-organisation of the cardiology unit aimed at placing the patient at the centre of the clinical organisation, with professionals given more responsibility, based on efficiency. The new integrated practice unit is managed by a group of multidisciplinary professionals involving clinical cardiologists, specialists in arrhythmia and cardiovascular imaging, researchers, quality of care experts, prevention and rehabilitation specialists and nurses. Infrastructure was redesigned to better respond to future needs: from a lab centric vision to a department with access to CV images everywhere, optimized IT forms, adoption of international data standards to allow interoperability, evolving towards a zero footprint unit where teamwork is dreamwork. Results speak for themselves: in only 2 years, the average hospital stays went down from 7 to 4.39 days and mortality from 2.4 to 1.44 in 2013.

A Multidisciplinary approach for clinical guidelines implementation at national level

Doctor Catriona Jennings, from the Council for Cardiovascular Nurses and Allied Professions, also demonstrated the importance of multidisciplinary approach in prevention of cardiovascular disease. Examples of several research projects such as EuroAspire, EuroAction or MyAction for our heart put the multidisciplinary team at the centre of clinical guidelines implementation, to make sure that not only clinical aspects are monitored but also lifestyle habits. As a consequence, patients are made aware on the importance of a healthy diet, combined with physical activity. The multidisciplinary approach also allows not to treat the patient in isolation, but to involve spouses and families, hence encouraging changes for the whole family, which in turn results in a better health for the whole entourage of the treated patients.

Role of basic science in medical research

The final speaker, Professor Barbara Casadei, representing the Council for Basic Cardiovascular Science of the European Society of Cardiology, gave the audience specific examples of how basic science, which is often perceived as too far from concrete outcomes for the patient, is actually key for the progress of medical research. The first example relates to atrial fibrillation, a condition with no available treatment with beneficial effects on death, stroke or heart failure, except anticoagulants, which are targeted to treat symptoms. Significant progress was made in less than a decade thanks to the identification of a new therapeutic target. Atrial NOX2 oxidase was identified as a main source of reactive oxygen species in the human atrial myocardium. Once established that NOX2 is increased in case of atrial fibrillation, experiences on the mouse to inhibit NOX2 activity with statin therapy, which is currently being tested in large clinical trials.

The second example addresses peripartum cardiomiopathy, a disorder of unknown etiology that leads to heart failure between the last month of pregnancy and the first 6 months after delivery. In only a few years, the combined discoveries that prolactin is the driving factor for peripartum cardiomyopathy and that it could be blocked by bromocriptine in mice now result in a proof for concept pilot in high incidence regions, which suggest that bromocriptine is beneficial in patients with peripartum cardiomyopathy.

Finally, in the case of sudden cardiac death, basic research also helped predict whether children are at risk for sudden death.

Such examples demonstrate that basic science generates novel insights that can be directly translated into improved health outcomes. Without basic science, there is no identification of mechanisms, no new targets, no new treatment pipeline and eventually no progress.

The session was concluded with optimism and enthusiasm: in spite of limited resources and budget constraints on research and health systems budget, individual initiatives show that well designed investment may result in beneficial outcomes for the patients and the community.