

Country report Hungary – April 2016



Report by **Professor Istvan Czuriga et al.**

National CVD Prevention Coordinator for Hungary
Prepared for the EACPR "Country of the Month" initiative

Contact: [email](#)

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Health care | Risk factors | Prevention methods | Prevention activities | Cardiac rehabilitation | Future

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This report was prepared by **by Prof. Istvan Czuriga MD, PhD**, with the assistance of:

- **Prof. Robert Gabor Kiss MD, PhD**, President of the Hungarian Society of Cardiology
- **Prof. Kalman Tóth MD, PhD, ScD**, President Elect of the Hungarian Society of Cardiology
- **Eszter Szabados MD, PhD**, Head of the Department of Cardiovascular Prevention and Rehabilitation, University of Pécs Medical School
- **András Vertes MD**, President of the working group of Cardiovascular Prevention and Rehabilitation, the Hungarian Society of Cardiology
- **Attila Simon MD, PhD**, President of the Hungarian Society of Cardiovascular Rehabilitation
- **Zsolt Szelid MD, PhD**, Member of the working group of Cardiovascular Prevention and Rehabilitation, the Hungarian Society of Cardiology
- **Daniel Czuriga MD, PhD**, assistant lecturer, Member of the Hungarian Society of Cardiology

Baseline Information about Hungary

Hungary is situated in central Europe with a size of 93,028 km², more than half of which consists of low land surrounded by mountain ridges and hills. In 2012, Hungary had a population of 9,976 million inhabitants and a gross domestic product (GDP) of 124 billion dollars. The capital of Hungary is Budapest, a city of some 2,000,000 inhabitants. In Hungary, executive, legislative and judicial duties are carried out within the framework of a parliamentary democracy.

I. Structure of Health care in Hungary

Structure

Overall, the Hungarian government is responsible for the Hungarian health care system, but other key actors are the National Health Insurance Fund Administration (NHIFA) and the State Secretariat for Health Care. Hungarian health care is centralised and organised under the authority of a governmental office (National Health Care Providing Office). The military health care service is another governmental health care provider.

There are 20 invasive cardiac centres and approximately 16 non-invasive inpatient cardiology departments in Hungary. Among the twenty invasive centres, 7 have an affiliated cardiac surgery department. There are also inpatient cardiac rehabilitation centres available. Primary percutaneous coronary intervention service is centrally organised with all invasive centres involved in a 24/7 service of acute invasive care. Outpatient cardiology services are county-based or district-based and they cover the whole country.

In theory, every Hungarian citizen should have a Social Security Number, and almost everybody is insured. The main source of health care funding is the compulsory health insurance contribution, which is calculated as a percentage of gross wages. Health care spending is 7.82% of GDP and approximately 1,729 USD per capita. Only 64% of this is provided by public sources, the remaining part being provided by private sources.

Number of cardiologists: 1216 (12/100,000)

Number of cardiologists active in Hungary and below the retirement age at NHIFA service: approximately 690 (6.8/100,000).

There are prevention programmes operating in the country for risk factor screening and public education. Regulations for prohibiting smoking and healthy nutrition programmes in schools are important among these preventive efforts.

Finances

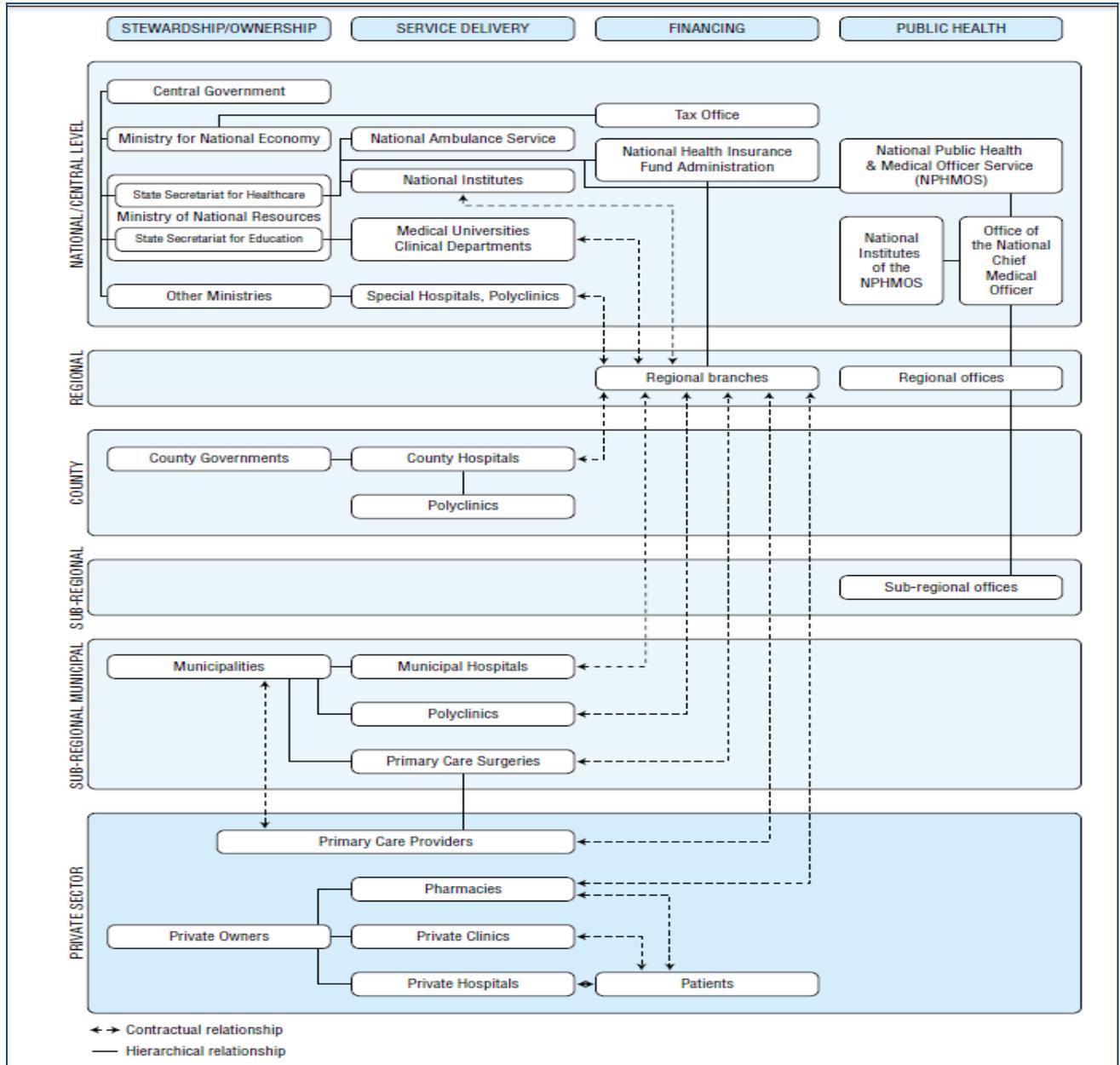
There are three main drug reimbursement categories. These are

- Normative reimbursement: patients must pay 20%, 45% or 75% of the drug's price.
- Indication-related reimbursement: patients must cover 10%, 30% or 50% of the drug's price plus 300 HUF (~1 EURO) for packaging of the drugs.
- Socially disadvantaged reimbursement: 100% reimbursement up to a monthly threshold of 12,000 HUF (~40 EURO) (calculated on the basis of the cheapest available product).

The system of patient referral to inpatient cardiac rehabilitation centres is funded by the NHIFA, while outpatient cardiac rehabilitation programmes are privately funded.

The Hungarian Society of Cardiology has a popular webpage (<http://szivderito.hu>) for cardiovascular prevention and public education visited by 1.5 million Hungarians so far (since 2014 September).

Flow chart for the Hungarian Health Care System:



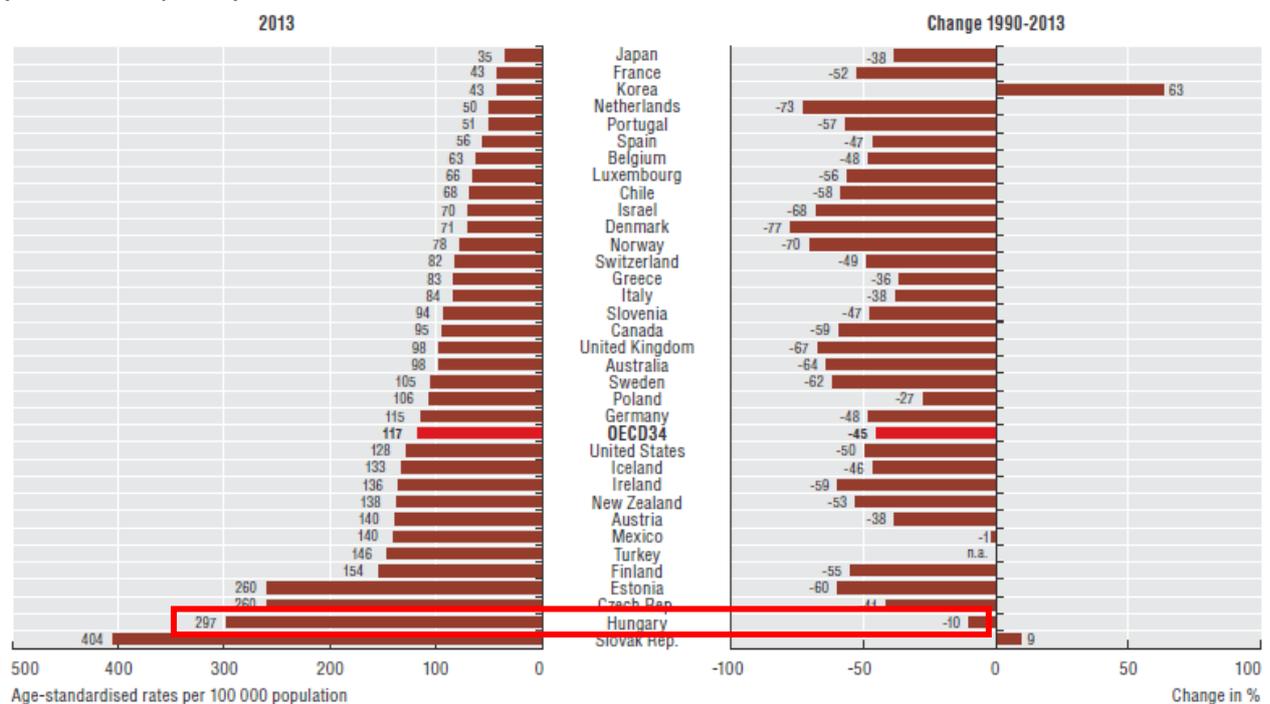
Source: Gaal, P., *et al.*, Hungary health system review. Health Syst Transit, 2011. 13(5): p. 1-266.

II. Risk factor statistics

CVD Mortality

According to recent data, cardiovascular deaths represent 49.7% of the overall mortality in Hungary. Despite the decrease in CVD mortality and consequently increased life expectancy over the past few decades, the CVD mortality rate of 636/100,000 inhabitants in Hungary still remains roughly twice that of the European Union average. Deaths of ischaemic heart disease, a major cause of CVD mortality decreased by 10% between 1990 and 2013, and attained an age-standardised rate of 297/100,000 inhabitants.

Figure 2. Ischemic heart disease mortality in 2013 and its change between 1990-2013 (or nearest years).



Source: OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933280741>

At the same time, cerebrovascular mortality also fell rapidly by 54% and reached an age-standardised rate of 118/100,000 inhabitants.

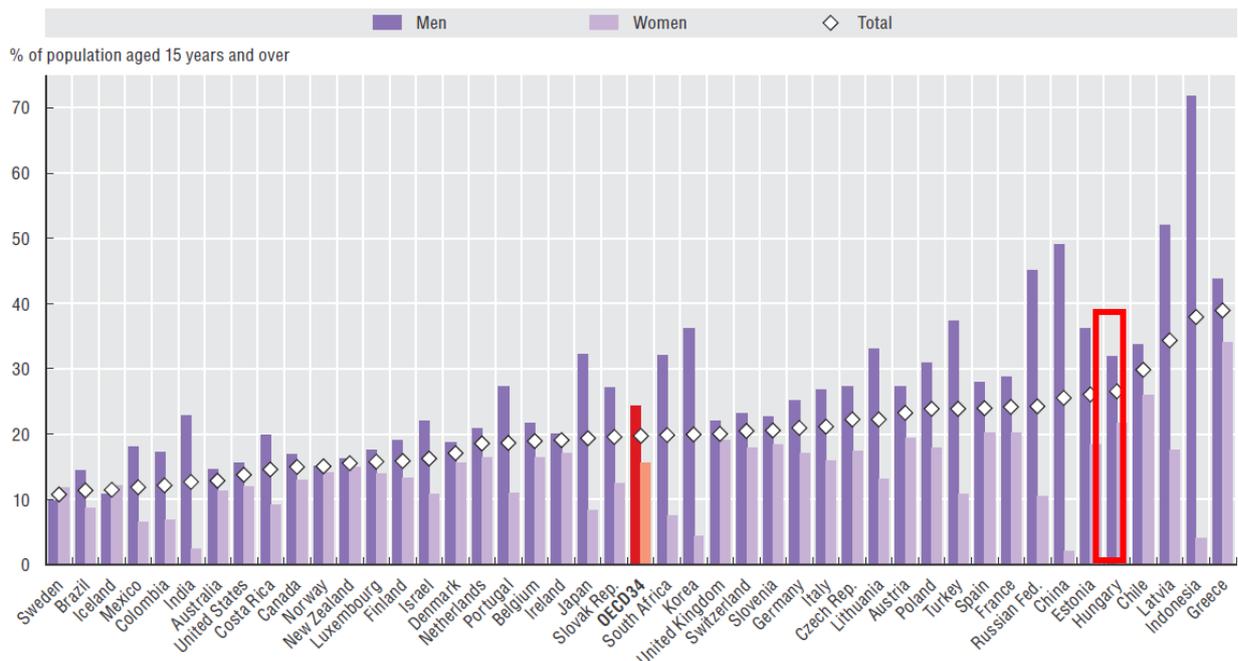
PCI resources

In Hungary, the quality of cardiac care, including the number and efficacy of primary percutaneous coronary intervention (PCI) centres has displayed a significant improvement during the last decade. Currently, there are 17 PCI centres, all of which provide a 24/7 primary PCI service. The mean population per primary PCI centre is 587,400 inhabitants and the number of percutaneous coronary interventions per 1,000,000 inhabitants was 553 in the year 2011.

Main CVD risk factors

Smoking represents a major cause of CVD in Hungary. Approximately, one fourth of the Hungarian population smokes daily. However, recently introduced national regulations on tobacco use in public places may help to curb public smoking habits to some extent.

Figure 3. Daily smoking in adults (2013 or nearest year).

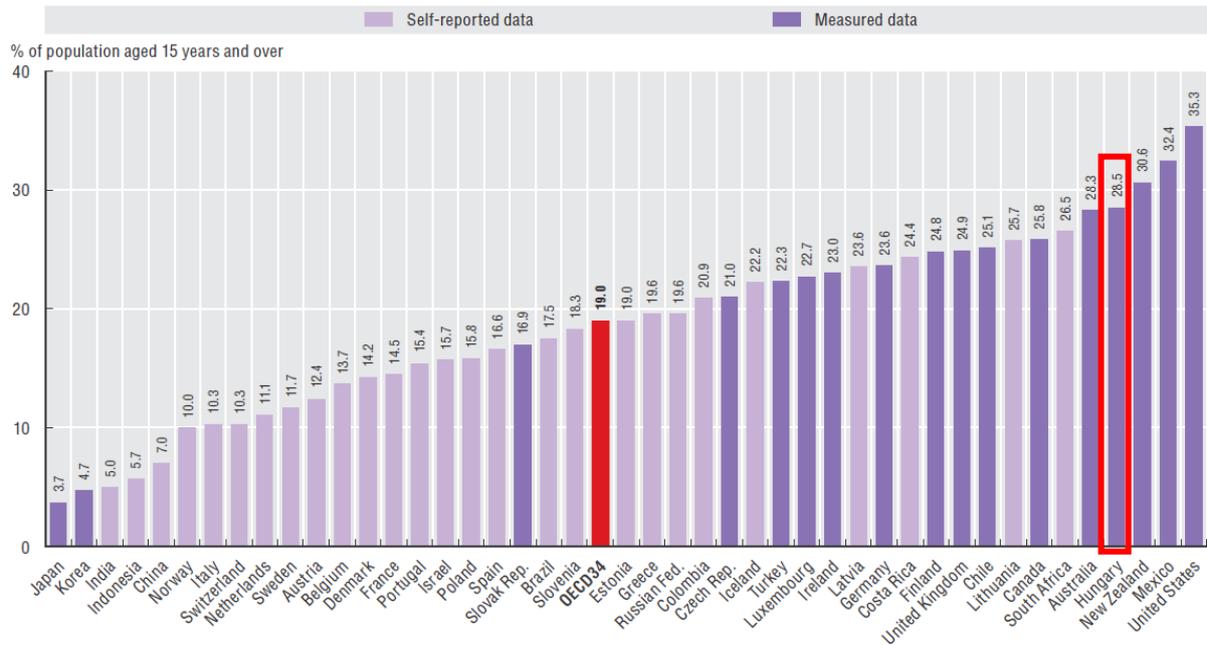


Note: Countries are ranked in ascending order of smoking rates for the whole population.
Source: OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink  <http://dx.doi.org/10.1787/888933280827>

Obesity and overweight are major etiological factors behind hypertension, lipid disorders, diabetes and CVD in general. Hungary was shown to be one of the most obese and overweight countries in recent registries (see Figure 4). The calculated body mass index was abnormal in 50%, with an average level of 25.7 ± 6 kg/m² in females and 27.2 ± 6 kg/m² in males.

Figure 4. Obesity among adults (2013 or nearest year).



Source: OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933280857>

Although accurately measured national data on cardiovascular risk factors in Hungary is lacking, recent surveys provide evidence of a high prevalence of increased blood pressure (45.5%) and increased LDL cholesterol level (44.19%) in the adult population. The prevalence of elevated blood pressure is also high, with 29.3% in asymptomatic participants without known hypertension. The risk of diabetes mellitus has also been calculated in a recent national study of 2,420 participants. Using the FINDRISK score, the risk of diabetes was found to be 71.2%. In the same survey, a marker of subclinical arteriosclerosis, namely carotid intima-media thickness (cIMT) was measured in asymptomatic participants. A strong association of cIMT with age was also found. Increased cIMT was found in 13% of the 50-60 age group and found in 39% of the 60-70 age group. In a selected central Hungarian population of asymptomatic participants without any cardiovascular medical history, the coronary calcium score was calculated and found to be over zero in 73.3% of participants over the age of 50.

III. Main actors and Prevention methods

Who delivers?

The Public Health Department (overseen by the Ministry of Human Resources) is responsible for creating a health strategy in Hungary. There is a cardiovascular public prevention programme developed by the National Institute for Health Development, which seeks to promote good health behaviour of the public and inform citizens about public health issues. Programmes and regulations are carried out by the National Public Health and Medical Officer Service. It makes recommendations for further developments and contributes to the successful implementation of these guidelines.

As regards cardiovascular prevention, the Hungarian Society of Cardiology (MKT), and more specifically its working group for Cardiovascular Prevention and Rehabilitation is responsible for creating health programmes. This workgroup arose from the fusion of four previous workgroups, as the outcome of a proposal initially suggested by the EACPR. Its most important responsibilities are as follows:

- Prevention, epidemiology and public health research
- Cardiac rehabilitation
- Sports cardiology

Furthermore, cardiovascular prevention activities in Hungary actively involve the Hungarian Society of Hypertension, the Hungarian Atherosclerosis Society, the Hungarian Diabetes Association and the National Institute of Primary Care.

The main actor in post-graduate education is the Department of Cardiovascular Prevention and Rehabilitation at the University of Pécs Medical School, which was founded in 2015.

Where?

An important part of cardiovascular prevention is related to general practitioner (GP) practice, where cardiovascular problems may be detected at an early stage. To be able to fulfil this task, GPs receive regular post-graduate training courses. Another important role of GP practices and cardiologists is the implementation of secondary prevention during patient follow-up. In the hospital setting, patients admitted with cardiac problems are provided rehabilitation in specialised rehabilitation centres, where they can take part in rehabilitation programmes like physiotherapy and can receive health education.

Guidance

To ensure a wide accessibility of current recommendations, the ESC guidelines are translated into Hungarian and distributed by the MKT.

The mainstay of post-graduate education is the cardiology conference organised every year by the MKT, which has a long tradition of being held at Balatonfüred.

In 2015, the Cardiovascular Prevention and Rehabilitation Congress was also organised for the first time in Pécs. We think that in time this will also create a tradition.

A number of cardiology related journals exist, which are published in Hungarian and represent an important forum for post-graduate education (Cardiologia Hungarica, Kardiológus, Kardiovaszkuláris Prevenció és Rehabilitáció).

Patient education is of course a crucial component of cardiovascular prevention. Both the MKT and several other organisations offer online patient education via the net.

Quality control

Under the leadership of MKT, Hungary participated in several international programmes, including EUROASPIRE.

The latest complex health behaviour programme created in 2006 is called the "National Programme for Preventing and Treating Cardiovascular Diseases".

Important data regarding cardiovascular prevention can also be retrieved from the "National Registry of Myocardial Infarction" run by the Gottsegen György National Cardiology Institute.

IV. Main Prevention activities

Legislation, smoking: over the past few years, a series of laws and regulations have been created in Hungary with the aim of promoting public health. On 26th April 2011 the Hungarian Parliament passed the amendment of the "Act on the Protection of Non-smokers" by a big majority. The initiative was carried out in cooperation with governmental institutes, civil associations and authorities and the WHO. According to its main regulations, smoking is prohibited in public institutions, in workplaces, in public transport services, in stops and stations, in playgrounds, in public places (e.g. restaurants, waiting rooms), even in open air spaces of public education and health care service institutions. Furthermore, from 1st January 2013, only those tobacco products may be marketed in Hungary that contain combined warnings on their packets. These products can only be purchased in designated places where those under 18 years of age are not permitted to enter.

Food habits: as for the promotion of healthy eating, since 2011, an extra tax has been levied on food containing excessive salt, sugar or caffeine. Since 2014, it is forbidden to market foods that contain more than 2% of trans-fatty acid. "Stop salt" is a national salt lowering programme that has attempted to reduce salt intake of the population by restricting the salt content of processed food, public catering and home meals.

Physical activity: "Let's move Hungary" is a leisure activity initiative containing a "10,000 steps walking" programme designed to change the sedentary lifestyle of the population. In addition, between 2010 and 2014, some 530 kilometres of bicycle paths were constructed, so the Hungarian cycle path network in 2014 was approximately 4,000 kilometres long. By 2020, the authorities are planning to build a 5,300-6,000 km long nationwide network.

Children: school programmes are important for health maintenance in the young. HAPPY-week is a Hungarian Aqua Promoting programme of the younger generation, in which water consumption is promoted in primary schools. In the last 5 years, 170,000 students of 540 primary schools have participated in this programme and have learnt the benefits of drinking clean water over consuming soft drinks. In school cafeterias, only healthy products may be sold. There are also school programmes that promote greater milk, fruit and vegetable consumption among children. More than 250 canteens joined the "Exemplary canteen programme" from all over the country, and strove to make better meals with the use of locally available ingredients and bio products for approximately 700,000 children.

World Heart Day: since 2000, World Heart Day has been held on the last Sunday of September, as initiated by the World Heart Federation. From the very start, the Hungarian Society of Cardiology and the Hungarian National Heart Foundation became involved with this event. The initiative called World Heart Day encourages people to reduce cardiovascular risk and it promotes a healthy lifestyle. Hungary also takes part in other European campaigns such as "Go Red for Women". Moreover, 2015 was the year of stroke prevention in Hungary, which sought to cut down stroke events, disability and deaths. The currently ongoing "ACTION - FOR - HEALTH" EU project is helping to reduce health inequalities among people living in the most backward regions of Hungary.

Screening: As part of the European National Health Care Programme, Hungary's comprehensive health screening programme for 2010-2020 focuses especially on heart and vascular diseases. With the help of this programme, visitors can learn about resuscitation techniques, the anatomy and function of the human body, get information about therapeutic possibilities and get lifestyle advice. A so-called screening bus visits 125 sites every year, reaching out to a large number of people irrespective of their age, residence or occupation.

V. Cardiac rehabilitation

For whom

Participation in cardiac rehabilitation programmes is currently available for all patients with heart disease. Priority access to rehabilitation without waiting lists is offered to patients undergoing acute cardiac events or cardiovascular surgery. Patients being treated with heart failure or stable angina can participate in the programmes on a scheduled basis. Here, there is no age limit or any other limitation. Our goal is to increase the ratio of those patients referred to rehabilitation who have suffered myocardial infarction. Repeated cardiac rehabilitation is also available free of charge, but in this case, waiting lists may apply.

By whom and how

In Hungary, inpatient and outpatient programmes are equally available for cardiac rehabilitation patients, but inpatient care is more common. Cardiac rehabilitation is delivered primarily by the national health care service. The share of private medical institutions that provide cardiac rehabilitation is negligible. Similar to German speaking countries and to other countries of the Central and Eastern European region, Hungary has founded its cardiac rehabilitation services on inpatient care facilities. At present, 38 wards can provide 1,738 cardiac rehabilitation beds for a total population of about 10 million. Of these facilities, there are larger ones with 200-400 beds offering a specialised cardiac rehabilitation environment, but most cardiac rehabilitation centres operate with 30-50 beds in the vicinity of the patients' residence. From 2011, the national health care administration issued tenders for the development or reconstruction of about 50 new or renewed outpatient cardiac rehabilitation facilities. These facilities offer outpatient programmes for an ever-increasing number of patients. It should also be mentioned here that other important forms of cardiac rehabilitation include voluntary patient clubs. Currently, there are 25 of these clubs in Hungary. Most of them are supported by local health care professionals, and they act as member organisations of a loosely knit National Heart Association.

Cardiac rehabilitation services are provided by a complex team of experts and professionals typically made up of physicians, physiotherapists, psychologists, dieticians, medical nurses, health advisors and social workers.

In 2014 (based on a 94.9% sampling of data available), 25,925 patients participated in cardiac rehabilitation programmes. 125 physicians, 29 psychologists, 93 physiotherapists and 30 dieticians took part in the provisioning of the related services. Here, 41.3% of all patients involved entered the respective programme for the first time and the average duration of inpatient therapy was 20 days. The majority of the patients entered the programme after cardiac surgery, a substantially smaller proportion, about 20% of all the subjects, had recently suffered myocardial infarction. The share of heart failure patients among participants was rather modest (i.e. a few percent at most).

Hungarian medical schools have been awarding cardiac rehabilitation MD qualifications since 2007. A specialised graduate training has been offered by independent university faculties since 2015. All specialised cardiac rehabilitation MDs are also required to attend professional upgrading courses every 5 years. Further professional training for team members is provided in the form of conferences and cardiac rehabilitation periodicals.

Audit and costs

The professional aspects and requirements of cardiac rehabilitation services are subject in part to regulations. For example, effective regulations exist in the form of accepted practices governing the rehabilitation of patients with ischaemic heart disease. In 2015, a consensus document was published on the role of dietary therapy in cardiac rehabilitation. The objective service provisioning requirements for the practice of inpatient and outpatient rehabilitation programmes (personnel and material requirements, including those related to instruments and technical equipment) are subject to state regulations.

Today, data concerning rehabilitation practices is accessible via a number of sources. The national health insurance agency monitors the composition of patients participating in the programmes, the duration of the programmes, as well as the rate and instances of mortality during the course of the programmes. Most rehabilitation wards and outpatient care institutions publish annual reports on their respective activities, which include data on the number of patients participating in each programme, the composition of patients and personnel requirements. The National Registry of Myocardial Infarction was expanded in 2015 with a sub-registry for cardiac rehabilitation data. The aim was to provide a source for statistics on the treatment of patients following myocardial infarction (assessment of heart condition, medication, training requirements and programmes, etc.). In 2015, the health care authorities initiated a data collection programme involving a number of medical institutions and professional areas. The objective of the programme is to provide information on the composition of patients, the nature and gravity of heart conditions treated, the practical results of testing the recently introduced and implemented Rehabilitation Provisioning Programmes, the compliance of actual treatment indices with the indications and objectives postulated by the above-named programmes, as well as the quality and the level of utilising the resources accorded to and invested in the development of these programmes. The data collected may be of use in the development of a new model of financing – based on homogeneous patient groups – designed to replace the present remuneration system based on the reimbursement of daily expenses.

In our country we have a number of professional associations, among which cardiac rehabilitation is also represented. Earlier, we had a working section within the Hungarian Society of Cardiology, called the Rehabilitation and Exercise Physiology working group, restructured in 2013 – according to European conventions – into a new section named the Prevention and Rehabilitation working group. As an independent professional organisation, the Hungarian Society of Cardiovascular Rehabilitation deserves a mention here. The two organisations vowed to develop close ties of cooperation with each other. They jointly and regularly organise symposia, professional conferences and seminars. Moreover, they work together on post-graduate educational and training projects, as well as on the development of patient information systems and on adopting new professional

standards and regulations. Numerous members of these organisations are also registered members of the EACPR. They participate at EUROPREVENT meetings and actively strive to achieve professional objectives set by the EACPR.

As regards inpatient and outpatient care, the cost of cardiac rehabilitation is currently covered by the national health insurance agency (equally for initial, later or repeated phases). The operation of patient clubs is financed by membership fees and funds awarded by tenders.

VI. The Future

Needs

Despite a decrease in cardiovascular mortality in Hungary due to early revascularisation therapy of myocardial infarction and an improvement in early mortality rates, prevention and rehabilitation are still far from satisfactory. One of the reasons for this is the absence of nationwide prevention programmes regarding healthy nutrition and regular exercise, although some progress has been made in recent years regarding smoking. At the same time, our country is being evermore affected by medical disorders characteristic of affluent societies like obesity and diabetes.

Possibilities and Obstacles

Financing actions of cardiovascular disease prevention and rehabilitation should be clearly reflected in the national budget. Our outpatient cardiac rehabilitation network, which is currently being created, must serve the overall goals of prevention. For this to happen, however, the right human resources framework will need to be established via training promotion along with the above-mentioned financing. By utilising unified protocols, patients' compliance and adherence to lifestyle changes, as well as medication need to be improved. The ageing and decreasing population also present formidable challenges for the future. And, of course, not only can a declining number of active employees be seen, but there has also been an increase in the retired population with an emerging prevalence of cardiovascular diseases. Last but not least, environmental damage represents a great threat that needs to be tackled in the future.

Plans

Younger generations must be reached through government measures intended to encourage a healthy lifestyle. Doing this, Hungary could achieve breakthrough results within one or two decades and this ought to be reflected in the future statistical data.

For this purpose, we should seek to cut the smoking rate, take steps to improve nutrition and physical activity behaviours, further increase the percentage of patients with controlled hypertension, improve cardiovascular prevention, as well as increase the proportion of relevant patients who could benefit from cardiac rehabilitation and secondary prevention.

Owing to the IT explosion in recent years, e-health and mobile health applications are increasingly gaining ground. These technical achievements need to be extensively exploited in both primary and secondary prevention as well as in rehabilitation so that the Hungarian populace can actively benefit from them.

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