

Country report Poland – June 2014



Report by **Prof. Piotr Jankowski**

National CVD Prevention Coordinator for Poland
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

I. Structure of Health care in Poland

Everyone in Poland has equal access to healthcare services. Poland has a mandatory social health insurance system financed by income-related contributions that covers almost the whole population. The central government establishes the principles and guidelines. Apart from the public institution there are also private health insurance companies, however, their market share is below 1%.

The Polish health system relies on the principle of solidarity: the National Health Fund covers the cost of the health services required by a person in case of illness regardless of the amount of social tax paid by that person. The purpose of health insurance in Poland is to cover the costs of health services provided to insured persons, prevent and cure diseases, finance the purchase of medicinal products and medical technical aids, and provide benefits to those temporarily incapacitated and unable work.

In 2010, Poland had 2.1 practising physicians per 1000 inhabitants, well below the European Union (EU) average. Furthermore, the number of practising nurses per 1000 inhabitants in the country, i.e. 4.9 was also below the EU average. Approximately 13.3% of all practising physicians were over 65 years of age. The number of cardiologists per 100 000 inhabitants was 5.0, the number of specialists in internal medicine was 26.0 and the number of physicians specialising in family medicine was 16.0.

Primary health care is provided by general/family physicians. The fundamental role of primary health care is disease prevention, treatment, assistance, coordination and the integration of different services. Currently, the whole population is covered by a network of primary care physicians. The common practice is that relevant basic examinations should be performed and evaluated at the primary care stage before patients are referred for secondary care. Emergency care is provided free of charge and accessible without a referral requirement.

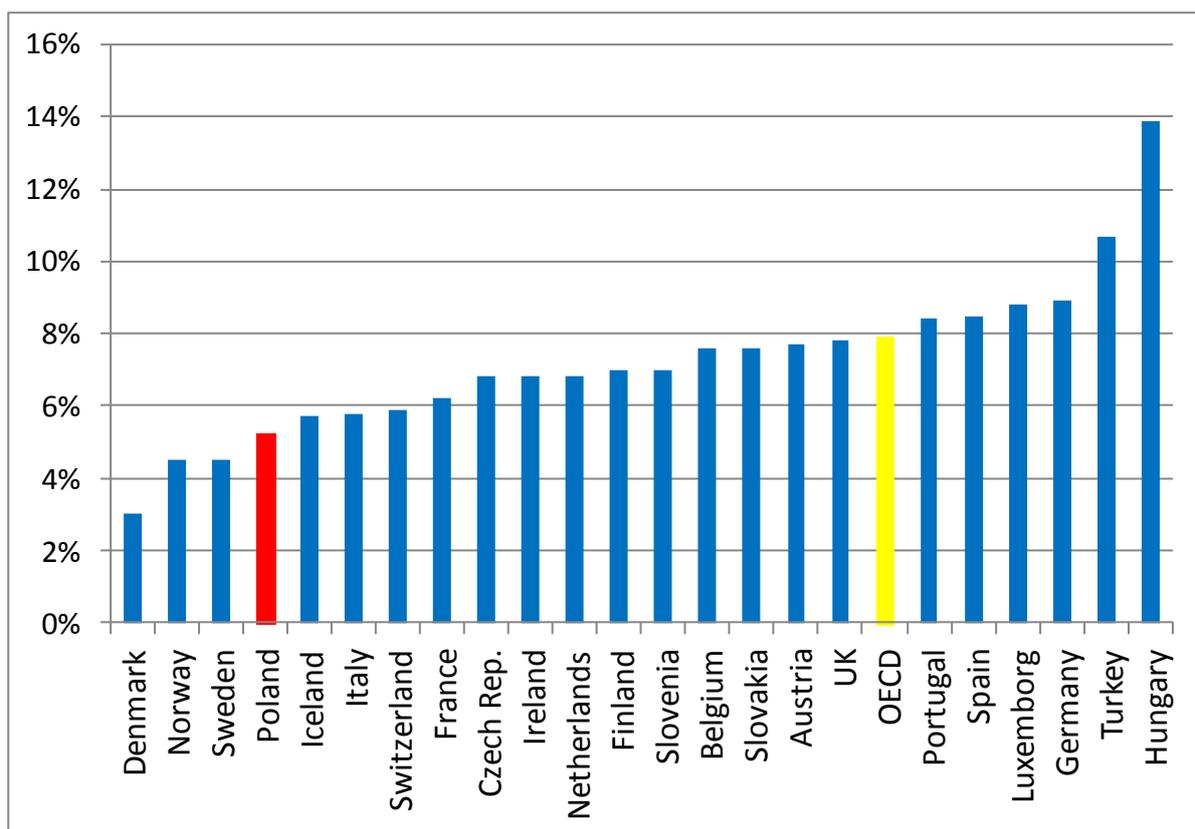
In 2010, there were 795 hospitals in Poland, of which 286 were private. There are 665 hospital beds per 100 000 inhabitants in the country, compared to the EU average of 551. Eighty-four percent of all health care providers providing outpatient care in Poland are private. Insured patients do not pay for the service if a health care provider has a contract with the National Health Fund.

Health and medical care costs account for about 7% of Poland's gross domestic product (GDP). The average for the EU is 9.8%. In 2010, total expenditure on health amounted

to 1389 USD in purchasing power parity (PPP) terms, compared to an EU average of 3152 (OECD Health data 2012). Public expenditure on health accounts for about 71% of total expenditure (76% in EU). The rest is covered by **households' incomes (24%)**, private health insurance (0.7%), and companies other than health insurance (3%). About 60% of all private expenditure on health is spent on drugs, and 30% on medical services (outpatient consultations 28%, hospital care 2%). Expenditure on public health and prevention programmes in Poland accounts for about 2.3% of current expenditure on health. Public sources (social security funds, central government including Ministry of Health, municipal governments) cover roughly 97% of the costs of hospitals and only about 40% of drugs costs.

As the quality of medical care in a given country is closely related to health expenditure a good way to compare different health systems may be the Bang-For-the-Buck adjusted score, which is calculated on the basis of the Euro Health Consumer Index and healthcare spendings per capita in PPP dollars. Based on this score Poland is ranked 17th among the 34 analysed European countries. One of the parameters of the quality of medical care is the mortality rate in acute myocardial infarction patients. The in-hospital and short-term mortality rates for acute myocardial infarction in Poland are lower compared to most OECD member states (Figure 1).

Figure 1. Case-fatality in adults aged 45 and over within 30 days after admission for acute myocardial infarction in European members of OECD in 2011 (OECD data).



Source: OECD Health Data 2011, <http://www.oecd.org/els/health-systems/49105858.pdf>

References:

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http://www.pzh.gov.pl/page/fileadmin/user_upload/statystyka/Raport_stanu_zdrowia_2012.pdf (Polish)

2. Euro Health Consumer Index 2012. <http://www.healthpowerhouse.com/files/Report-EHCI-2012.pdf>

3. Health at a Glance 2013. OECD INDICATORS. <http://www.oecd.org/els/health-systems/Health-at-a-Glance-2013.pdf>

II. Risk factor statistics

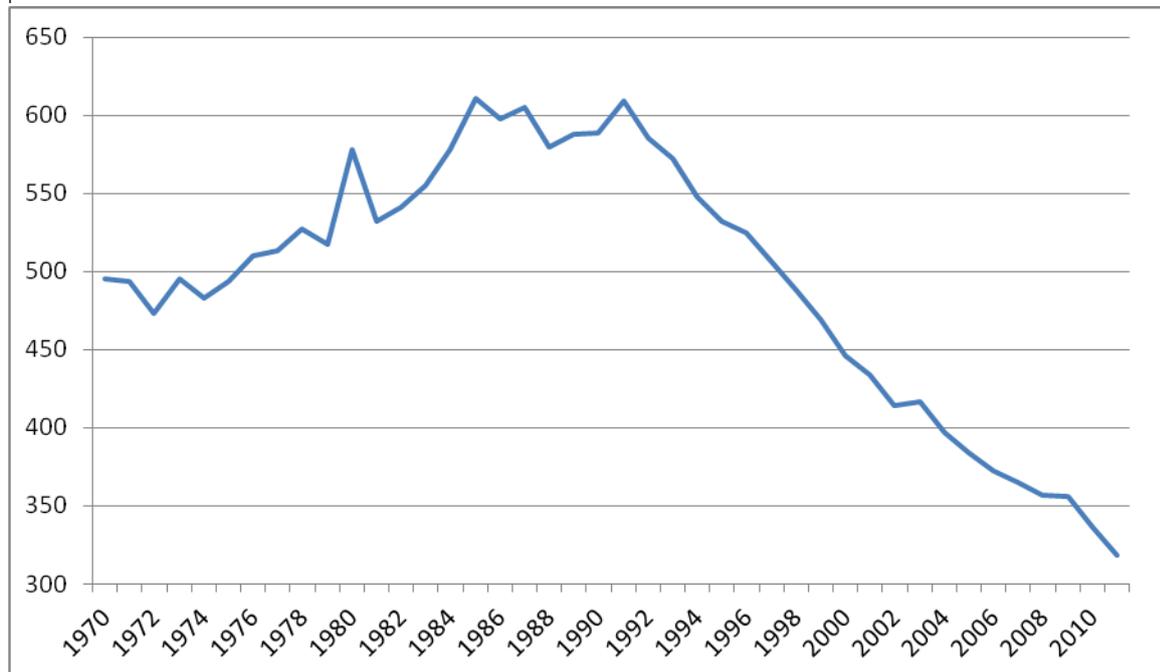
CVD Mortality

The average life span in Poland is 72.7 years for men (about 4.7 years lower than the EU average) and 81.2 years for women (about 2.0 years lower compared to the EU average). The sex-based difference in the average life span has not changed significantly over the last 20 years. The average life span has increased since 1991 (by 6.5 years in case of men and 5.8 years in case of women). About 51% of the increase achieved for men and 61% achieved for women has been related to reduced cardiovascular mortality. Cardiovascular diseases are the most common cause of death in Poland. In 2010, 40.8% of all deaths in men and 51.5% of all deaths in women were due to cardiovascular diseases.

The age-standardised death rate (SDR) for cardiovascular diseases has decreased since 1991 by 48% (Figure 1). Nevertheless, SDR for cardiovascular diseases is still 50% higher compared to the average SDR in the EU (58% higher in men and 43% higher in women). On the other hand it is 14% lower compared to the average SDR in the WHO European Region.

More than half of the decrease in deaths, related to ischaemic heart disease recorded between 1991 and 2005, were attributable to cardiovascular risk factors level change.

Figure 1. The age-standardised death rate for diseases of circulatory system, all ages, per 100 000



Source: European health for all database (HFA-DB), World Health Organization Regional Office for Europe

In both the 20th as well as the 21st Centuries the SDR for cardiovascular diseases was higher in men when compared with women. The difference was especially huge in younger subjects (Table 1).

Table 1. The age-standardised death rates for diseases of circulatory system, ischaemic heart disease, and cerebrovascular disease in 2011, per 100 000

	<65 years	≥65 years	All ages
SDR for diseases of circulatory system			
All	75.2	2280.4	317.8
Males	119.4	2810.1	415.3
Females	34.2	1948.2	244.8
SDR for ischaemic heart disease			
All	23.9	609.9	88.4
Males	40.4	838.6	128.2
Females	8.7	470.5	59.5
SDR for cerebrovascular diseases			
All	15.5	479.1	66.5
Males	21.9	540.0	78.9
Females	9.5	435.4	56.4

Source: European health for all database (HFA-DB), World Health Organization Regional Office for Europe

PCI resources

There are 149 catheterization laboratories in Poland (3.6 per 1 million inhabitants) spread across the whole country. Of these 130 provide a 24-hours service for patients with acute coronary syndromes. In 2012, 217 126 (5694 per 1 million inhabitants) coronary angiographies and 119 746 (3140 per 1 million inhabitants) percutaneous coronary interventions (PCIs) were performed. Approximately 66% of all PCIs were performed in patients with acute coronary syndromes. There were 742 primary PCIs in acute myocardial infarction per 1 million inhabitants (**the "Stent for life" initiative** suggests at least 600 primary PCIs per 1 million inhabitants). According to data from "the Polish Registry of Acute Coronary Syndromes" 79% of all ST-elevation myocardial infarction (STEMI) patients underwent reperfusion therapy (78% underwent angioplasty and 1% received thrombolysis) in 2009.

Main CVD risk factors

Smoking

The prevalence of main risk factors is presented in Table 2. The prevalence of smoking among adults is higher when compared with the average rate in both the EU and the WHO European Region. The prevalence of smoking has decreased by 34% among adult men and by 28% in women since 1993. The reduction in the number of daily smokers has been achieved partly thanks to non-smoking campaigns and tax increases on tobacco. The prevalence of smoking among boys is similar to the average rate for OECD countries, whereas the prevalence in girls is lower.

The prevalence of smoking in patients after hospitalisation due to coronary artery disease has not change significantly for over 15 years and is approximately 17%.

Fruits and vegetables

According to the FAOSTAT (Food and Agriculture Organisation of the United Nations Statistics) Database the average supply of fruits in Poland in 2009 was 59.4 kg/person/year compared to 91.7 kg/person/year in Europe. The average supply of vegetables was 126.1 kg/person/year (122.3 kg/person/year in Europe). The proportion

of Polish children eating fruits and vegetables on a daily basis is low. Moreover, it has decreased during the last 15 years.

Physical activity

The engagement of adults in sport or other physical activities, especially on a regular basis, is slightly lower compared to the EU. On the other hand Polish children exercise more often than children in other countries. The proportions of Polish girls and boys exercising on a regular basis have increased since 2002.

Obesity

The prevalence of obesity has increased since 1997 in both sexes. The prevalence of obesity in patients after hospitalisation due to coronary artery disease has increased during the last 15 years, especially in men. Nowadays, approximately 30% of coronary patients are obese.

Blood lipids

The prevalence of hypercholesterolemia has not changed significantly since 2002. Most people in Poland are not aware they have high cholesterol level. The control of hypercholesterolemia in general population is below 10%.

Among patients after hospitalisation due to coronary artery disease 70% have LDL cholesterol level at least 1.8 mmol/l, although 87% takes lipid-lowering drugs.

Blood pressure

The prevalence of hypertension in adults aged 18-79 years is 32% whereas in the elderly (>80 years) approximately 73% (66% in men and 76% in women). Although the prevalence of hypertension in adults has not changed significantly during the last 20 years, the control of hypertension has increased significantly (from 4-9% in eighties and 12% in 2002 to 26% in 2011).

The prevalence of high blood pressure in patients after hospitalisation due to coronary artery disease is now lower (35%) compared to the beginning of the present century.

Diabetes

The prevalence of diabetes has increased since 2002 (from 5% to 7%).

Alcohol consumption

The average consumption of alcohol in Poland (Table 3) is on the level of the average consumption in EU (10.0 l/year) and in the WHO European Region (9.8 l/year). However, the consumption of spirits and beer is significantly higher and the consumption of wine is much lower than in the EU and the WHO European Region.

According to the recent survey about 13% of men declared they drink at least 40 ml of ethanol and about 1% of women declared they drink at least 20 ml of ethanol during one occasion (<http://www.tnsglobal.pl/jakpijapolacy/pdf/raport.pdf>, Polish).

Table 2. The prevalence of main risk factors in Poland.

Risk factor	Prevalence [%]	Remarks
Smoking, adults (>15 years of age)		
All	27	2011, daily
Males	31	smokers
Females	21	
Smoking, children (15 years of age)		2009-2010,
Males	16	smoking at least
Females	12	once a week
Daily fruit eating, adults		
Males	56	2011
Females	63	
Daily fruit eating, children (15-16 years of age)		
Males	20	2010
Females	26	
Daily vegetables eating, adults		
Males	59	2011
Females	66	
Daily vegetables eating, children (15-16 years of age)		
Males	22	2010
Females	30	
Regular engagement in sport, adults	5	2013
Regular engagement in other physical activity, adults	8	2013
Daily moderate-to-vigorous physical activity, children (15 years of age)		
Males	23	2009-2010
Females	10	
Obesity		
All	22	2011, BMI ≥ 30
Males	24	kg/m ²
Females	20	
Hypertension		
All	32	
Males	35	2011
Females	29	
Hypercholesterolemia		
All	61	2011, total
Males	61	cholesterol $\geq 5,0$
Females	61	mmol/l or drugs
Diabetes		
All	7	
Males	7	2011
Females	6	

Source: Piotr Jankowski (ref. 1, 2, 4, 5, 6, and 7)

Table 3. Pure alcohol consumption in adults (>15 years of age) in 2011.

	Pure alcohol consumption [litres per capita per year]
Altogether	10.2
Spirits	3.8
Wine	0.9
Beer	5.5

Source: Piotr Jankowski (ref. 1, 2, 5, 6, 7, and 8)

References:

1. Wojtyniak B et al. Sytuacja zdrowotna ludności polski i jej uwarunkowania. NIZP-PZH. Warszawa 2012.
http://www.pzh.gov.pl/page/fileadmin/user_upload/statystyka/Raport_stanu_zdrowia_2012.pdf (Polish)
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<http://faostat3.fao.org/faostat-gateway/go/to/download/C/CC/E>
7. Eurobarometer 412. Sport and physical activity.
http://ec.europa.eu/public_opinion/archives/ebs/ebs_412_en.pdf
8. Zdrojewski T. Prevalence and control of cardiovascular risk factors in Poland. Assumptions and objectives of the NATPOL 2011 Survey. *Kardiol Pol* 2013; 71: 381-392.
9. Jankowski P et al. Secondary prevention in patients after hospitalisation due to coronary artery disease: what has changed since 2006? *Kardiol Pol.* 2014; 72: 355-362.
10. Bandosz P et al. Decline in mortality from coronary heart disease in Poland after socioeconomic transformation: modelling study. *BMJ.* 2012; 344: d8136.

III. Main actors and Prevention methods

Who delivers?

Public health level

- Ministry of Health: Formulates and evaluates policies for health and the strategic planning of health services.
- National Institute of Public Health — National Institute of Hygiene: Plays a **fundamental role as the central government's expert and supervisory institution.** <http://www.pzh.gov.pl/page/?L=1>
- Chief Sanitary Inspectorate: The main tasks, among others, include prevention of smoking and overweight. <http://www.gis.gov.pl/?lang=en&go=news>
- Agency for Health Technology Assessment in Poland: This body identifies the best treatment methods and the effective use of resources. <http://www.aotm.gov.pl/index.php?id=397>
- A number of public health departments in Polish medical universities provide expert and scientific basis for all preventive activities.

Cardiology care and prevention

Main official actors:

- The Polish Cardiac Society - an association of Polish cardiologists, physicians and scientists interested in cardiology, medical students and representatives of cardiology related activities.
- Other medical societies, such as the association of family physicians, internists, diabetologists, etc.

Main care givers:

The main actors involved in long-term cardiovascular prevention are general practitioners and, to some extent, district nurses. Citizens have easy access to primary health care centres. Patients can consult internists and cardiologists via referral from primary care (it is not difficult to get a referral). However, emergency care is available without a referral. Private cardiac clinics are also available, especially in cities. The number of nurses, physiotherapists and dieticians specialising in cardiovascular prevention is limited. Practising cardiologists often focus on acute cardiac care as well as on evaluating patients with secondary prevention problems referred from primary care. Practising cardiologists are well aware of and knowledgeable about the guidelines in their field and tend to comply with them, especially in the case of secondary prevention on an individual patient level.

Where?

Preventive management can be accomplished in primary care settings, hospitals and private clinics. Nurse-based programmes focused on cardiovascular prevention are not common. Some special rehab centres do exist but most of the structured secondary prevention and rehabilitation are provided by centres run by cardiac clinics or departments in hospitals.

Screening for the main risk factors

The screening for the cardiovascular risk factors in patients without symptoms of atherosclerotic disease is the responsibility of primary care physicians. The physicians follow the current guidelines in this regard. However, the fragmentary data from various surveys suggest not all physicians (or not always) screen exactly according to the guidelines. Unfortunately, there is no national quality assurance program concerning screening for cardiovascular risk factors.

Guidance

The Polish Cardiac Society endorses all ESC guidelines. All ESC guidelines are translated into Polish and printed in the Polish Heart Journal (Kardiologia Polska). The translated **guidelines are also available on the Polish Society of Cardiology's website** (<http://www.ptkardio.pl/Wytyczne-278>). The Polish Cardiac Society periodically arranges and promotes meetings and conferences aimed at promoting, explaining and discussing these guidelines. They also play fundamental role in the residency training of future cardiologists.

Experts from the Polish Cardiac Society take part (usually with experts from other scientific associations) and often initiate writing statements on specific aspects of cardiology in local conditions. This concerns risk factors management, cardiovascular imaging as well as drug treatment.

The Polish Cardiac Society, together with other scientific Societies, established the Polish Forum for Prevention of Cardiovascular Disease which aims at the dissemination of the cardiovascular prevention guidelines.

Quality control

A nation-wide registry of acute coronary syndrome hospitalisations called the "Polish Registry of Acute Coronary Syndromes" provides information on secondary prevention of coronary artery disease at discharge in unselected, hospitalised due to an acute coronary syndrome patients.

The Cracovian Program for Secondary Prevention of Ischaemic Heart Disease was initiated in 1996 (hospitals from a defined area participated in the Programme). The main goal of the programme was to assess and improve the quality of medical care in the field of secondary prevention of coronary artery disease. Since 1996 five surveys were completed. The same centres took part in the EUROASPIRE (European Action on Secondary Prevention through Intervention to Reduce Events) surveys. These initiatives allowed for the assessment of temporal changes in the implementation of recommendations as well as for international comparisons. Polish centres participated also in the PURE (Prospective Urban Rural Epidemiology) Study.

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1. Jankowski P et al. Secondary prevention in patients after hospitalisation due to coronary artery disease: what has changed since 2006? *Kardiol Pol.* 2014; 72: 355-362.
2. Kotseva K et al. EUROASPIRE III: a survey on the lifestyle, risk factors and use of cardioprotective drug therapies in coronary patients from 22 European countries. *Eur J Cardiovasc Prev Rehabil.* 2009; 16: 121-137.

3. Podolec P et al. Polish Forum for Prevention: a response to the European Society of Cardiology 'call for action' in Poland. Eur J Cardiovasc Prev Rehabil. 2010; 17: 250.

IV. Main Prevention activities

The National Health Program 2007-2015

In 2007 the Polish government adopted a resolution on the National Health Program 2007-2015. The first aim of the Program was defined as the decrease in the premature cardiovascular mortality in Poland. This was in accordance with the European Heart Health Charter.

http://www2.mz.gov.pl/wwwfiles/ma_struktura/docs/zal_urm_npz_90_15052007p.pdf
(Polish)

The European Heart Health Charter

The European Heart Health Charter was accepted by the Ministry of Health in 2009.

<http://www.heartcharter.org/>

Campaigns

- World Heart Day

The Polish Cardiac Society organises a nationwide celebration of World Heart Day. In 2013 this event was organised in Lublin, 2012 it was held in Kraków and 2011 in Sopot, etc. The activities include walks, health checks and education. In order to make the event attractive to the public, regional and national singers and other celebrities take part in the festivity. Both regional as well as national media are involved including television, radio, magazines, and newspapers.

Additionally, many branches of the Polish Cardiac Society organise regional events. For example, the World Heart Day is celebrated every year on the Main Square in Kraków.

<http://www.dzienserca.com.pl/496-zdjecia-lublin-2013> (Polish)

<http://www.dzienserca.artsart.pl/galeria2012.html> (Polish)

<http://www.dzienserca.com.pl/473-sopot-2011> (Polish)

<http://www.dzienserca.artsart.pl/> (Polish)

- World No Tobacco Day

The World No Tobacco Day (May 31th) is celebrated every year. A lot of newspapers, magazines, TV canals, and internet websites as well as some celebrities support this initiative.

<https://pl-pl.facebook.com/SwiatowyDzienBezTytoniu> (Polish)

<http://jarkzucipalenie.pl/swiatowy-dzien-bez-tytoniu-31-maja-2014/> (Polish)

http://www.promocjazdrowia.pl/index.php?option=com_content&view=article&id=105&Itemid=75

- Don't Smoke Day

The Don't Smoke Day has been celebrated in Poland since 1991. A lot of newspapers, magazines, TV channels, and internet websites as well as some celebrities support this initiative.

http://www.promocjazdrowia.pl/index.php?option=com_content&view=article&id=106&Itemid=76

- The "Rzuć palenie razem z nami" ("Quit smoking with us") campaign

This initiative was supported by public TV, radio, and the biggest newspaper in the country. The campaign ran a dozen years. According to the organisers data each year about 20-30% of smokers tried to limit the number of cigarettes smoked, about a million

of smokers tried to quit smoking, and 200 to 400 thousand claimed they quit smoking as a result of the campaign.

http://www.promocjazdrowia.pl/index.php?option=com_content&view=category&layout=blog&id=52&Itemid=37

<http://www.wirtualnemedi.pl/artykul/ogolnopolska-akcja-rzuc-palenie-razem-z-nami>
(Polish)

- "Lokal bez papierosa" ("Premises without cigarettes")

This campaign supports the smoking ban in public places.

<http://lokalbezpapierosa.pl/> (Polish)

- "Nie pal przy dziecku" ("Don't smoke near children")

The aim of the campaign is to educate the public on passive smoking.

<http://www.niepalprzydziecku.pl/> (Polish)

- World Hypertension Day

The World Hypertension Day is celebrated in Poland widely every year. This is an opportunity to spread knowledge about blood pressure measurements, risks related to high blood pressure, and benefit related to the treatment of hypertension.

<http://www.zdrowie.fit.pl/profilaktyka/swiatowy-dzien-nadcisnienia-tetniczego,571,1,0.html> (Polish)

<http://www.prawapacjenta.eu/?pId=2789> (Polish)

- "Cała Polska leczy nadciśnienie" ("The whole Poland treats hypertension")

The main goal of the campaign, which was initiated by Polish Society of Hypertension, is to increase the control rate of hypertension in Poland.

<http://cpln.pl/> (Polish)

- Campaigns promoting physical activity

A number of events and campaigns promoting physical activity are organised each year (e.g.: **"Na Rynek Marsz"** which was organized by Robert Korzeniowski, an Olympic and World Champion in Racewalking (1), **"Siła odruchu"** which was supported by the Polish Ministry of Sport and Tourism (2), **"Stop zwolnieniom z WF-u"**, a campaign initiated by the Polish Ministry of Sport and Tourism aiming at the reduction of exemptions from physical education classes (3). This campaign uses images of famous athletes. Also the UEFA campaign "Get Active!" was widely supported in Poland (4).

(1) <http://www.korzeniowski.pl/zdjecia/na-rynek-marsz-2010-4> (Polish)

(2) <http://www.silaodruchu.pl/> (Polish)

(3) <http://www.mmsilesia.pl/458536/2013/10/17/stop-zwolnieniom-z-wfu-ruszyla-kampania-promujaca-aktywnosc-fizyczna-wideo?category=sport> (Polish)

(4) http://www.kampaniespoleczne.pl/kampanie,571,z_fotela_sie_rusz_ale_juz (Polish)

- "Owoce w szkole" ("Fruits at school")

This campaign promotes healthy food at schools.

<http://www.owocewshkole.org/> (Polish)

- "Szkoła w ruchu" ("Schools in movement")

The year 2013 was announced by the Ministry of Education as the year of "Schools in movement". This campaign promotes physical activity and healthy food in schools and kindergartens.

<http://www.szkolawruchu.men.gov.pl/> (Polish)

The above mentioned campaigns are just some examples of a large number of national and local initiatives.

Additionally, during the Congress of the Polish Cardiac Society in 2012 a group of experts made a call for "Smoke-free Poland in 2030". This initiative induced some discussion in the media.

Projects

- The Polish Forum for Prevention of Cardiovascular Disease

The main goals of the Polish Forum for Prevention of Cardiovascular Disease are unification, promotion and dissemination of guidelines for prevention of cardiovascular disease, as well as education of policy makers, physicians and patients.

The Polish Forum for Prevention was initiated by the Polish Cardiac Society, and is now supported by the following associations:

- The Polish Cardiac Society
- The Polish Society of Internal Medicine
- The College of Family Physicians in Poland
- The Polish Society of Hypertension
- The Polish Diabetes Association
- The Polish Paediatric Society
- The Polish Society of Neurology
- The Polish Society for Atherosclerosis Research

All the above societies agreed to promote the unified guidelines and support one another in relations with policy makers.

<http://www.pfp.edu.pl/> (Polish)

- "Pamiętaj o sercu !" ("Remember about the heart!")

This project aims at the promotion of healthy lifestyle and prevention of cardiovascular disease. The project addresses both adults and children. This initiative is supported by the National Institute of Cardiology, the Polish Cardiac Society, the Ministry of Health and public TV.

<http://www.pamietajosercu.pl/> (Polish)

- "Gra o serce" ("Playing for the heart")

This project is focused on children, parents, and teachers.

<http://www.graoserce.pl/> (Polish)

- The Optimal Model of Comprehensive Rehabilitation and Secondary Prevention

In order to improve access to and quality of secondary prevention and rehabilitation programmes the Polish Cardiac Society proposed a comprehensive model of rehabilitation and secondary prevention.

<http://www.ncbi.nlm.nih.gov/pubmed/24065281>

http://www.ptkardio.pl/Optymalny_model_kompleksowej_rehabilitacji_i_wtornej_prewencji-2014 (Polish)

Currently, the Polish Cardiac Society is working on the educational multimedia platform for patients with coronary artery disease, which is going to provide in a modern way up-

to-date knowledge on cardiovascular prevention and other points, which may be important for a patient after myocardial infarction.

Education

All undergraduate programmes leading to the healthcare profession at university level include competence in cardiovascular prevention. At a residency level there are also compulsory goals on preventive and health promoting competences at both the individual patient and group level for most specialities including cardiology. The Polish Society of Cardiology and other societies and authorities at the regional and local levels arrange courses focused on cardiovascular prevention and support of healthy lifestyle among patients.

Recently, the Polish Cardiac Society created an educational multimedia platform for physicians which in modern way provides up-to-date knowledge on cardiovascular prevention and other points which may be important for a patient after myocardial infarction.

V. Cardiac rehabilitation

For whom

Poland has no fixed age limits for participation in cardiac rehabilitation, but most participating patients are below 75 years of age. Generally, patients after acute coronary syndromes (ACS), heart surgery, and percutaneous myocardial revascularisation are referred to centres providing secondary prevention/rehabilitation programmes.

Although guidelines recommend participation in secondary prevention/cardiac rehabilitation programs for patients with stable coronary artery disease, generally these patients are generally not referred to rehabilitation centres.

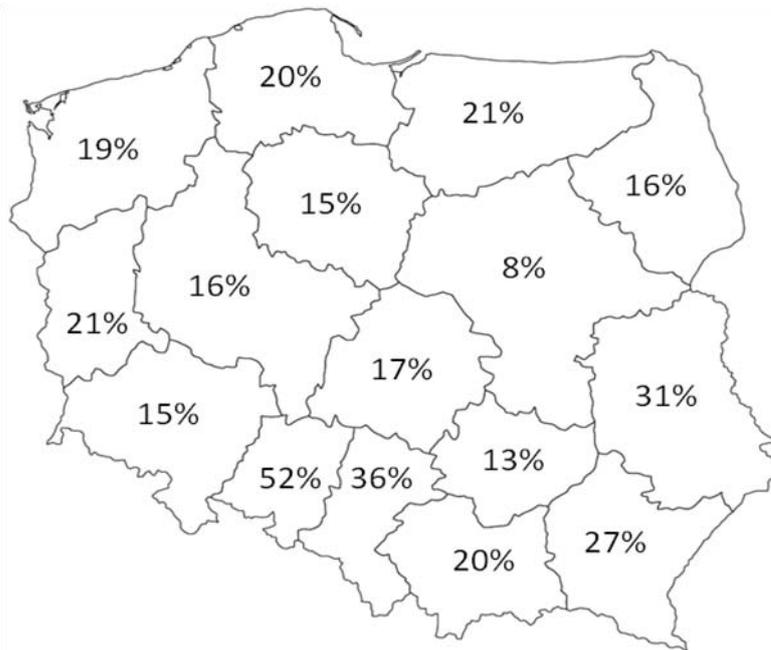
By whom and how

The first stage of rehabilitation usually starts in the cardiology or cardiac surgery wards. The second stage is usually provided by specialised rehabilitation centres. Most of them are hospital-based and provide either in-hospital or outpatient rehabilitation, or both. There are also some centres providing only outpatient rehabilitation. The number of these centres is now increasing. Nevertheless, the vast majority of patients participating in cardiac rehabilitation still participate in an in-hospital programme.

The content and duration of the programmes may differ between centres but in-hospital rehabilitation usually lasts 2-4 weeks whereas outpatient rehabilitation lasts about 12 weeks. Within the in-hospital programme the service is usually provided by physiotherapists, dietician, and generally also a psychologist collaborating closely with cardiologists and/or specialists in medical rehabilitation. Within the outpatient programme the service is usually provided by physiotherapists collaborating closely with cardiologists and/or specialists in medical rehabilitation.

According to the recent report from the Working Group on Rehabilitation and Exercise Physiology of the Polish Cardiac Society about 20% of all patients undergoing heart surgery or suffering from an acute coronary syndrome participate in a stage II rehabilitation programme. This proportion is higher (over 30%) in some big cities and differs significantly across the country (Figure 1).

Figure 1. The regional differences in the proportion of patients undergoing heart surgery or suffering from an acute coronary syndrome participating in stage II rehabilitation in Poland



Source: Gałaszek M. The current status of cardiac rehabilitation in Poland. The Report from the Polish Cardiac Society Working Group on Rehabilitation and Exercise Physiology 2013; figure by P. Jankowski

In order to improve the access to and quality of secondary prevention and rehabilitation programmes, the Polish Cardiac Society proposed a comprehensive **model of rehabilitation and secondary prevention**. This idea covers not only patients after heart surgery or acute coronary syndrome but also patients with heart failure or stable coronary artery disease. The exemplary scheme of the process of care for patients after hospitalisation due to ACS is presented below (Figure 2).

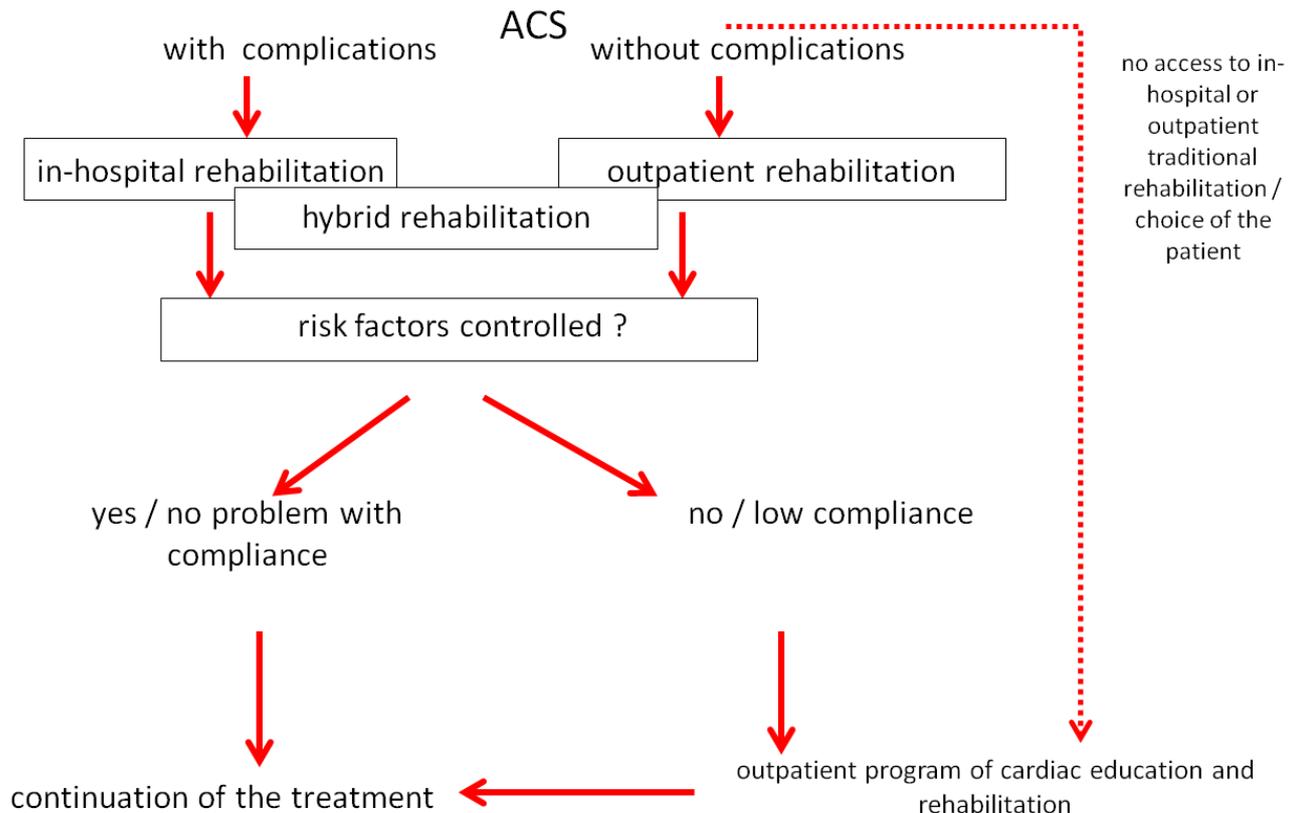
The experts proposed referring patients with uncontrolled risk factors, in spite of the participation in traditional in-hospital or outpatient rehabilitation, to an "outpatient program of cardiac education and rehabilitation" which was based on the methods used in the EuroAction and EuroAction Plus studies. This program could fill the gap in the regions where access to the traditional in-hospital or outpatient rehabilitation is low.

Additionally, the experts proposed quality assurance of the service provided to patients based on the level of risk factors control 6 months following the end of the program. The authors estimated that implementation of the proposed system in the whole country could reduce number of deaths by 3389, myocardial infarctions by 3872, myocardial revascularizations by 13499, hospitalisations due to heart failure by 8819, and hospitalisations due to other (then heart failure) reasons by 14363 yearly.

<http://www.ncbi.nlm.nih.gov/pubmed/24065281>,

http://www.ptkardio.pl/Optymalny_model_kompleksowej_rehabilitacji_i_wtornej_pre_wencji-2014 (Polish)

Figure 2. The Optimal Model of Comprehensive Rehabilitation and Secondary Prevention. The scheme of the process of care for patients after hospitalisation due to ACS



Source: <http://www.ncbi.nlm.nih.gov/pubmed/24065281>; figure by P. Jankowski

Audit and costs

Cardiac rehabilitation for patients after heart surgery or acute coronary syndrome is covered by the National Health Fund. There are also some education programmes for patients with diabetes covered by the National Health Fund.

The experts from the Working Group on Rehabilitation and Exercise Physiology of the Polish Cardiac Society prepare the report on status of cardiac rehabilitation in Poland on yearly basis. This report is focused on the access of patients to the cardiac rehabilitation and on the financial issues of the cardiac rehabilitation in Poland.

<http://www.kardioreh.ptkardio.pl/images/File/AKTUALNY%20STAN%20REHABILITACJI%20KARDIOLOGICZNEJ%20W%20POLSCE%20XI%202013.pdf> (Polish)

Nowadays, there is no formal quality assurance program covering the whole country. However, some information on quality of cardiac rehabilitation programs in Poland can be found in results from the Cracovian Program for Secondary Prevention of Ischaemic Heart Disease and also in EuroAspire surveys data.

References:

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VI. The Future

Needs

In general, cardiac prevention and rehabilitation in Poland holds a high standard. However, there is still room for improvement of the service quality. Even more important issue is that not all patients have access to education and/or rehabilitation programmes. In addition, focus on the socioeconomically deprived and persons with disabilities is desirable. The control rate of the main risk factors in general population is still insufficient. Therefore, more emphasis on this issue is needed in the nearest future.

Possibilities

The national initiatives for a healthier lifestyle as well as the projects focused on patients with cardiovascular disease with several tasks ongoing are promising.

Obstacles

Effective counselling on healthy lifestyle requires a high number of highly educated health care professionals. Physicians and especially family doctors play the most important role in the education of patients as the number of physiotherapists, dieticians, and nurses specialising in cardiovascular prevention is too low (although increasing) in Poland. However, due to time constraints the physicians usually cannot spend as much time on education as needed.

Another difficulty is too low health care budget in Poland (although it has been increasing over recent years).

Plans

Improvement of the control of the main cardiovascular risk factors in the general population is essential. We plan to develop national quality registers to include structured registration of all relevant lifestyle and risk factor parameters and to encourage joint cardiovascular prevention activities within the healthcare system (in primary, cardiac and geriatric care settings). From a public health perspective the young population should be the main target of the national projects aiming at changing lifestyle of the population.

Concerning cardiac rehabilitation we plan to increase proportion of patients after heart surgery or acute coronary syndrome or with heart failure participating in the rehabilitation programmes. We also aim at creating the possibility for patients with stable coronary artery disease or other high risk patients to participate in an education programme.

Finally, we should aim at a smoke-free country by the year 2030.