Cardiovascular Diseases and Lifestyle
Abstract

This document summarises the presentations and discussion taking place at the workshop organised by Policy Department A on the limits and opportunities of the Cardiovascular Disease and Lifestyle, held at the European Parliament, in Brussels.

The aim of the workshop was to inform the Members of the ENVI Committee and all participants on the relationship between cardiovascular and related diseases and a number of lifestyle choices in the context of the European Union, and to have an overview of the global and EU policy landscape addressing these challenges.

Firstly, leading experts in the field presented the most up-to-date scientific, medical and socio-economic research assessing the disease trends and the effect that lifestyle choices have on the outset and treatment of diseases. The various risk factors, health inequalities and how to focus more on a preventive approach were discussing, emphasising the best and worse practices across Europe. The second part of the workshop focused on the current EU's policy and advocacy programme and activities landscape, highlighting the ones that are having the most significant impact on cardiovascular health. Representatives from patients and professional organisations outlined the role that they have in promoting and implementing cardiovascular disease prevention and highlighted that more needs to be done be reduce the future incidence of cardiovascular diseases in the European Union.

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<tbody>
<tr>
<td>BMI</td>
<td>Body mass index</td>
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<td>CVD</td>
<td>Cardiovascular Diseases</td>
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<td>DG SANTE</td>
<td>Directorate General for Health and Food Safety</td>
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<td>EC</td>
<td>European Commission</td>
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<td>EHN</td>
<td>European Health Network</td>
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<td>ENVI</td>
<td>Committee on the Environment, Public Health and Food and Safety of the European Parliament</td>
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<td>EP</td>
<td>European Parliament</td>
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<td>ESC</td>
<td>European Society of Cardiology</td>
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<td>EU</td>
<td>European Union</td>
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<td>FP</td>
<td>European Commission’s Framework Programme</td>
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<td>MEP</td>
<td>Member of the European Parliament</td>
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<td>MS</td>
<td>Member State</td>
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<td>NCD</td>
<td>Non-Communicable Diseases</td>
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<td>PH</td>
<td>Public Health</td>
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EXECUTIVE SUMMARY

On Tuesday 9 October, the European Parliament Committee on the Environment, Public Health and Food Safety (ENVI) held a workshop entitled “Cardiovascular Diseases and Lifestyle”. The workshop was chaired by MEP Ms Soledad Cabezón Ruiz and MEP Mr Alojz Peterle. Leading experts from the field presented and discussed the primary and secondary risk factors for Cardiovascular Diseases (CVD), health inequalities, the role of patient and professional organisations, best practices, and areas of improvement.

Ms Cabezón Ruiz MEP introduced the scale of the issue and emphasised the importance of this workshop, as a tool to raise awareness and highlighted the role of education as a critical element to achieve a reduction in unhealthy behaviours and to facilitate lifestyle changes.

The first panel opened with a presentation by Dr Navickas, from the Joint Action Chrodis+, who provided an overview of current CVDs prevalence and persistent challenges in relation to CVDs prevention. Dr Navickas argued that there is a gap between evidence-based recommendations and actual implementation and stressed the importance of closing this gap to lead to greater population benefits.

Dr Madsen, Medical Director at the Norwegian Medicines Agency, provided an overview of risk assessments for CVDs and provided a comparative view on different levels of risk between, and within EU countries. Some risk factors for CVDs include: education, age, sex, diet, cholesterol, blood pressure, diabetes, weight, smoking and physical inactivity. There is a significant divide between healthy, well-educated people who have the knowledge to protect themselves from CVDs, and less-educated people who present a higher concentration of diseases.

Prof. Wood, Professor of Cardiovascular Medicine at the International Centre for Circulatory Health, National Heart and Lung Institute, Imperial College London, concluded the first panel by addressing the impact that changes to a healthier lifestyle can have in reducing the burden of clinical treatment for CVDs. Prof. Wood showed that more has to be done from the clinicians’ point of view, with regards to applying evidence-based programmes to reduce risk factors.

Prof. Hoes, representative from the ESC, opened the second panel by presenting on how best practices in CVD medicine can be better shared, through the joint action of policy makers, professionals and citizens. Prof. Hoes advised a number of evidence-based recommendations to tackle risk factors and presented best practice examples for the reduction of CVDs. Prof. Hoes stressed the importance for CVDs to become a top priority in the EU agenda.

Ms Løgstrup, director of the European Heart Network (EHN), presented the role of patient organisations in supporting the implementation of EU policies, and agreed with Prof. Hoes that CVDs needs to be treated as a very high priority at the EU level. The EHN plays a leading role in the prevention and reduction of CVDs, through advocacy, networking, capacity-building, patient support and research. Ms Løgstrup identified that lifestyle choices are highly influenced by citizens’ surroundings, and therefore national governments and the EU have the duty to improve the environment in which people live.

Prof. Sassi, Professor of International Health Policy and Economics at Imperial College London focused on the projections of the likely future of CVDs in Europe by 2050. Models looking at how all these trends could combine with each other showed that in all modelled scenarios there will be a significant increase in health expenditure and in the incidence of CVDs, even if all EU policies are implemented.
Mr Peterle MEP closed the workshop by stating that current CVDs trends are an area of concern and that more needs to be done with the knowledge that we have. To do so, the EU needs to improve its ability to look at the bigger picture in a comprehensive health strategy, rather than focus on policies on single diseases. Mr Peterle concluded that awareness on health issues is growing within the EP, but that more policies should still be developed to create an environment that enables people to take healthier choices.

**LEGAL AND POLICY BACKGROUND**

Currently, approximately six million new cases of cardiovascular diseases (CVDs) are identified in Europe alone every year, with Easter Europe presenting a significantly higher burden compared to the rest of the region, as represented in Figure 1. Overall, over 49 million people in the EU living with CVDs, at an economic cost of EUR 210 billion annually. With CVDs being the leading cause of death within the EU, there has been an increasing number of studies performed to promote the development of preventive practices to decrease and limit these statistics from worsening. The identification of lifestyle factors in the development, treatment and prevention of CVDs has been key in informing policy changes that tried to mitigate these risks. Policies and actions aiming at changing risky behaviours and promoting healthy lifestyles are proving to be effective tools in preventing or slowing down the development CVDs. Lifestyle factors such as smoking, dietary habits, physical activity and alcohol consumption all contribute to the development of CVDs, and policies and actions aiming at changing risky behaviours and promoting healthy ones can significantly prevent the development CVDs.

Figure 1: Age-standardised prevalence rate of CVD

Optimity Advisors using data from the EHN

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2. European Society of Cardiology, ‘About Cardiovascular disease in Europe’, escardio.org, (2018), accessible via: https://www.escardio.org/portal/site/Escardio/menuitem.c9f486f01a3ca18791f54de7202021ca/?vgnextoid=024f192dab883a410VgnVCM1000004e03a8c0RCRD&vgnextchannel=bb2a192dab883a410VgnVCM1000004e03a8c0RCRD&vgnextfmt=default&vgnextlocale=EN
THE LINK BETWEEN LIFESTYLE AND CARDIOVASCULAR DISEASES

In approaching the adjustment towards lifestyle factors, a multifaceted approach has to be taken. Identifying measures such as body mass index (BMI), age, medical history, diagnostics of medical conditions such as hypertension or high cholesterol to seek appropriate treatment have been central to controlling CVD development in the population. However, secondary prevention has been more and more the focus of health and Public Health (PH) systems, as an improvement in lifestyle choices can significantly reduce the prevalence and incidence of CVDs. Among the risk factors with the highest impact on the development of CVDs are tobacco use, alcohol consumption, and unhealthy eating habits. The development of CVDs, however, is highly complex, and has fluctuating risk levels dependant on factors other than lifestyle choices, such as the environment, genetic predisposition, demographic, population size, and resource availability. Although some elements cannot be altered at an individual level (e.g., age, gender, genetic predisposition to diseases, air pollution, population size), others, such as stress, smoking, housing, alcohol consumption and accessibility to health services can and have been the focus of European policies aiming at reducing the levels of health inequity within and between Member States (MS).

The difference in the prevalence of risk factors and associated disease burden is exemplified by a risk assessment that analysed and compared deaths caused by CVDs between Denmark and Greece. The high mortality rate in Greece was strongly correlated to unhealthy diet and high rates of smoking, as represented by the fact that 33% of CVD victims were reported to be active smokers at the time of death, with an additional 33% having given up smoking the year before. On the other hand, Denmark’s policy change implemented in the 1997, which had banned smoking indoors and in public places, had led to a 70% decline in deaths attributed by CVDs. This policy was then taken as example in both the UK and Switzerland, and later on by most EU countries.

THE POLICY CONTEXT

The past years have been characterised by a global acknowledgement of the links between lifestyle factors and NCDs and an urgent need to promote behavioural changes. This awareness has led to a common effort to tackle these risk factors to reduce the burden of CVDs. For example, the WHO has adopted several resolutions and charters, to combat CVD. Through the Global Hearts Initiative, the WHO offers technical packages for tobacco control, salt reduction and primary care management of CVD, providing support to national governments in the prevention of cardiovascular diseases.
According to the OECD, effective policies incentivise the use of marketing techniques to promote healthy choice, disincentive citizens from buying unhealthy products by increasing prices, and produce regulations for suppliers of unhealthy products. The EU policy framework has been in line with the global effort to reduce the incidence of CVDs, through the promotion of a healthy lifestyle. But policies which have been implemented had varied degrees of success, as their impact is also based on the structural, political and financial barriers set by national governments of each MS.

Examples of barriers to the success of preventive measures:

- **Tobacco:**

Smoking remains a key PH issue which although has declined in the past two decades, still remains a concern for CVD prevention. International frameworks, such as the ‘Framework convention of tobacco control’ have shaped EU policy, but the reproduction of guidelines to commit to the reduction of tobacco consumption is fragmented, leading to a lack of success of the smoking policy.

- **Alcohol Consumption:**

Although crucial in producing a decline in CVDs, alcohol policies lack of clarity on quantity of consumption, and research on the outcomes of alcohol policies is lacking. Moreover, alcohol is embedded as a cultural norm in many European countries, and this constitutes a significant barrier for policies’ success.

Policies which have had the most success have usually provided strict, legal implementation guidelines. They also aim at introducing cultural changes through soft-powers of marketing. For example, the European Commission (EC) has developed impactful policies and directives, including the Tobacco Product Directive, reforming tobacco advertising. Another example includes food packaging labelling, which highlighting high fats, salt and sugars in a clear way and nudges consumers to buy healthier options.

Example of success of preventive policies:

- **Dietary Habits:**

Dietary factors are the largest risk for CVD mortality. Finland established a positive policy changing the nation-states dietary consumption. In 1965, Finland’s diet was composed by 40% of fats, which led to high prevalence of obesity in the population, increasing the risk of CVD. In order to tackle the problem, the government, together with the private sectors, international organisations and NGOs, enabled a social policy that coordinated national school curricula to cover healthy diets and promote regular exercise. As a result, Finland saw a decline in obesity rates and a cultural change which resulted in lower burden of CVDs.

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12 OECD, Better policies for better lives, accessible via: https://www.oecd.org/about/4747755.pdf

8 PE 631.046
Research on CVD has been funded by the EU since the first EC’s framework programme (FP1) (1984-1987)\(^{15}\), but secondary prevention of CVDs has only started being at the core of EU policies from the 1990s, when the Council stated that more research was needed in the field\(^{16}\). In 2004, the Council called upon the EC and MS to ensure that cardiovascular health was addressed at individual and population-level, and, in the Luxemburg Declaration\(^{17}\), MS and the EC started cooperating with a number of organisations, associations and societies, to start preventive plans and ensure that appropriate policies would be adopted in all MS. In the FP7 that ended in 2013, 25 collaborative CVD research projects were funded by the EU, and research in this area continues under Horizon2020\(^{18}\). The third Public Health Programme (2014-2020) also supports initiatives and projects aiming at decreasing the burden of the disease, as the Joint Action CHRODIS and CHRODIS+, with the purpose to facilitate the dissemination of best practices in the prevention of CVDs, and NCDs more generally\(^{19}\).

An important step forward to ensure that appropriate policies were being delivered in the EU and in the WHO European Region, was the development of the European Health Charter\(^{20}\), with the assistance of the European Society of Cardiology (ESC)\(^{21}\) and the European Heart Network (EHN)\(^{22}\), the two largest European organisations committed to identify and provide evidence for specific areas of policies which will contribute the most in preventing avoidable death and disability from CVDs. As for the Charter, all EU cooperative development of programmes lead to new knowledge essential for the implementation of effective policies.

The EHN and ESC also manage the Secretariat of the MEP Heart Group, which is a forum to generate dialogue and activities at EU and MS level. The Member MEPs ensure that regulatory acts with the potential to impact on CVD status are present among the European Union’s work and priorities. The institution of the MEP Heath Group directly followed the development of the European Heart Health Charter, and the European Parliament Resolution on action to tackle CVDs\(^{23}\). An example of the success of the MEP Heart Group was the organisation of a meeting on trans fatty acids, which led to a letter to the EC’s president, urging the EC to set limits of the use of trans fatty acids in food produced by industries, that the Commission acted on.


\(^{17}\) Luxembourg Declaration of 29 June 2005, accessible via: http://www.ehnheart.org/component/attachments/attachments.html?task=download&folder=publications&id=1504


\(^{19}\) CHRODIS-JA, accessible via: http://chrodis.eu/about-us/


\(^{21}\) https://www.escardio.org

\(^{22}\) http://www.ehnheart.org/

PROCEEDINGS OF THE WORKSHOP

1. INTRODUCTION

1.1. Welcome and opening - MEP Ms Soledad CABEZÓN RUIZ, Co-Chair, ENVI Health Working Group

Ms Cabezón Ruiz opened the workshop by welcoming the audience and thanking the speakers and the Secretariat for their work in supporting the organisation of the workshop. She stressed that each year CVDs cause millions of deaths and disability in the EU. In 2015, almost 49 million people were living with CVDs in the EU. Hypertension and dietary factors are the largest risk factors for the development of CVDs and in the past years, while fruit consumption has increased, vegetable consumption remains low. Moreover, fat consumption has increased in Eastern Europe, with the prevalence of obesity and diabetes significantly increasing. Smoking remains a key PH issue in Europe, with women smoking nearly as much as men, and girls more than boys. However, despite all this data, Ms Cabezón Ruiz argued that the EU is not very focused on CVDs and emphasised the importance of this workshop, as education and awareness are critical in reducing unhealthy behaviours and facilitating lifestyle changes.

2. PART I: SCIENTIFIC, MEDICAL AND SOCIO-ECONOMIC RESEARCH ON LIFESTYLE CHOICES AND CVDs

2.1. Dr Rokas NAVICKAS, Scientific Coordinator, CHRODIS+ Joint Action

Dr Navickas provided an overview of the current state, including CVD prevalence, persistent issues in relation to CVD prevention and risk factors, and some insights on why what we know does not always work in tackling the diseases. He started the presentation by showing the CVD trends in the EU, where CVD mortality has ubiquitously decreased over the years, although not in the same way: Western Europe has experienced a sharper decrease compared to Eastern Europe.

Dr Navickas pointed out that if we look at the increase in life expectancy, the results in the past years appear very promising. However, if we look at the quality of the years of life gained, 20 to 27 years of years of life gained were non-healthy life years, mainly due to NCDs. Moreover, as chronic morbidities usually come with other condition, they are likely to cause early hospital admissions and long hospital stays. Therefore, Dr Navickas made the point that governments should see that maximising healthy life years is also an investment, because it would not only avert deaths and prolong life without disability, but it would also increase the number of productive years and reduce healthcare expenditure. For example, in 2011, 44% of the growth in the low- and middle-income countries resulted from the value of additional healthy years of life gained in the population.

Dr Navickas showed that in most countries, by the age of 65, almost 65% of people live with multi-morbidities, with the steepest decline in health starting at age 28. He also stressed that although most investments are made on treatment, most healthy life years gained derive from changes in lifestyle and reduction of risk factors responsible for CVDs. For example, in Finland, only 24% of gains was attributed to treatment. Smoking cessation alone was shown to have equal impact to all other treatments combined together. However, Dr Navickas highlighted that risk factors are not under control. On average, obesity is kept under control by clinicians in only 50% of cases across the EU. He also noted that CVDs share their risk factor with a number of other diseases, meaning that once we tackle risk factors for CVDs, such as smoking, physical activity, eating habits and education, the overall
health of the population will be affected. He stressed the need to integrate the education and community sectors with healthcare to enable prevention in the most effective way.

Dr Navickas concluded by saying that there is a significant gap between evidence-based recommendations and the implementation of preventive measures to increase cardiovascular health. He distinguished two types of gaps: over-use and under-use. Over-use of evidence referring to the inappropriate use of strategies with evidence against, or insufficient evidence for their effectiveness and safety; and under-use being the lack of implementation of proven effective strategies. He affirmed that a reduction of the gap between evidence and practice is likely to lead to greater population health benefits compared to most novel treatments.

2.2. Dr Steinar MADSEN, Medical Director, Norwegian Medicines Agency

Dr Madsen focused his presentation on risk assessments for CVDs, providing a comparative view on different levels of risk between and within EU countries. This included the shift from CVDs to cancer, as the leading disease resulting in the most deaths. The incidence of CVDs started declining from the 1980s, until 2013, when CVDs were no longer the most common cause of death. However, Dr Madsen argued that prevention of CVDs and the consequent shift to other diseases may cause new problems for the healthcare system. For example, there are implications on healthcare expenditure, as while CVD treatment is relatively cheap, patients with cancer are more expensive to treat.

Dr Madsen then described some risk factors for CVDs, which include: education, age, sex, diet, cholesterol, blood pressure, diabetes, weight, smoking and lack of physical activity. He highlighted the significant divide between the healthy and well-educated people, who have the knowledge to protect themselves from the disease, and the less-educated people who have a higher concentration of all diseases. He showed that the inequality gap is widening in Norway, where the difference in education levels between Oslo West and Oslo East is reflected in a difference in life expectancy of 9 years in males. Dr Madsen stressed that more needs to be done to try to close this health gap, not only to reduce the health inequality, but also because the gap is expensive for healthcare system, as the lower side of the gap includes individuals that have the biggest concentration of all diseases, while at the higher side of the gap there is the phenomenon called “disease compression” where all diseases occur together in the last year(s) of life.

Dr Madsen argued that although much needs to be done, in the past decade the progress in improving cardiovascular health has been significant. Today, CVDs have become the disease of elderly people, with all countries in Europe having decreased the incidence of ischemic heart disease. Moreover, treatment of CVDs has also improved in all countries, medicines to treat CVDs have become significantly cheaper, and the treatment of hypertension and high cholesterol is widely available and used in most European countries. Dr Madsen concluded his presentation by stressing that as treatment for CVDs continues to improve in all countries, the aim will be reaching a point where CVDs will be delayed to the latest stages of life and incidence concentrated in patients over 85.

2.3. Prof. David WOOD, Professor of Cardiovascular Medicine, Imperial College London

Prof. Wood addressed the impact that changes in lifestyle can have in reducing the burden of clinical treatment for CVDs and highlighted that the ESC has been developing guidelines for the secondary and primary prevention of CVDs since 1994, covering both lifestyle factors and therapeutic targets for CVD, as well as data collection tools. Prof. Wood based his presentation on the outcomes of the most recent EUROASPIRE survey (EUROASPIRE V) – the ESC European-wide survey looking at ischaemic heart disease. He outlined the results of the study, focusing on smoking, obesity and overweight people and
physical activity as the key lifestyle elements that constitute risk factors for CVDs. This survey specifically focused on secondary prevention, and interviewed patients one year after their acute CVD episode.

Starting with smoking, evidence shows that in order to prevent CVDs, it is important to identify smokers and provide repeated advice on how to stop, offering professional support. This may be through the use of cessation programmes which may include follow-up support, nicotine replacement therapies, varenicline and bupropion, either individually or in combination. The survey however showed that, of those patients with coronary diseases who were smoking in the month prior to their hospitalisation, the prevalence of persistent smoking was significant, with more than 50% of smokers keeping on smoking. Prof. Wood showed that the prevalence of persistent smoking was higher in the younger-than-50 years old population, with more than half reporting the intention to stop but not having any professional support to do so. This is particularly significant because it is the age group that would gain the most from stopping to smoke.

Prof. Wood then presented the findings on diet, which showed that approximately 38% of patients with CVDs are clinically obese or overweight, with very significant variations between European countries. However, only 25% of these patients are told by their clinicians that they are overweight, showing that obesity is a risk factor for CVDs that many clinicians ignore.

Finally, Prof. Wood outlined the results of the survey regarding physical activity. Evidence shows that a minimum of 150 minutes/week of moderate intensity aerobic physical activity is recommended, but only 1/3 of people exercise regularly, with significant differences between countries across Europe. Moreover, the survey showed that only 50% of patients with CVDs were advised to follow a cardiac prevention or rehabilitation programme. The data also showed that when advised, 70% of patients attended the programme, meaning that the problem mainly arises from the lack of awareness of the importance of these elements by clinicians.

Prof. Wood concluded his presentation stating that the results of the study clearly showed that more has to be done from the clinicians’ point of view, with regards to applying evidence-based programmes for smoking cessation, identifying obese and overweight patients, and advising patients to follow a cardiac prevention or rehabilitation physical activity programme.

3. PART II: QUESTIONS AND ANSWERS

Ms Cabezón Ruiz opened the floor for questions. The first question concerned the smoking ban in public spaces, and whether smoking should be prohibited at EU level. Prof. Wood answered to the question arguing that the public health approach to smoking cessation is much more important than any treatments that physicians can give. He spoke about the WHO Framework Convention on Tobacco Control (FCTC) as a success tool that has been used to reduce tobacco consumption at population level as it has changed the environment and therefore facilitated the physicians’ work to help an individual patient to stop smoking. A follow-up question was asked on the need to implement an EU-level coordination plan to prevent risk factors, compared to having interventions at Member State level. Dr Madsen stressed his belief in the importance of an EU plan, consistent in all countries, in relation to all the risk factors covered.

Moreover, in reply to a question enquiring whether more treatment for CVDs is needed, Dr Madsen answered that all MS should pay attention on not spending too much money on the development of new drugs to treat CVD with limited benefits, because the main issue to address should be ensuring that all people get access to the most basic treatment. He argued that more focus and investments should be put on decreasing the health inequality gap.
Dr Miklós Győrsi, Parliamentary Research Administrator, asked about the economic assessments looking at the costs of treatments compared to the costs of prevention. Dr Madsen addressed the question by saying that many of the CVD preventive drugs, such as statins, have become very inexpensive. Therefore, he agreed that most people should have these treatments. Dr Navickas added that although there is a lot of evidence showing that prevention is cheaper than treatment, in the long-run, there are a number of barriers to investing in prevention, such as: i) it takes much longer to see the impact of prevention, compared to treatment; ii) powerful corporations drive the use of risk factors and unhealthy lifestyle habits; iii) patients need to be involved in their lifestyle choices, and if they decide that it is easier for them to take a medicine or maintain their unhealthy lifestyles rather than exercising/following healthy diets/stop smoking there is little that healthcare professionals can do; and iv) healthcare professionals do not have an easy way to check if patients are following the advice they give, while there are biomedical tests that can check whether patients are taking medicines. Therefore, Dr Navickas concluded that although prevention is cost-effective, there are many barriers to its implementation compared to medical treatments.

The Q&A session concluded with a question addressed to the whole panel, enquiring if the speakers believed that a more integrated approach was needed to better address these problems. Dr Navickas, Dr Madsen and Prof. Wood all agreed that integrated care services are a key element for both primary and secondary prevention of CVDs. Prof. Wood showcased the UK as an example of a country where prevention is driven by nurses who work in multidisciplinary teams, leading to an effective reduction in risk of CVDs.

4. PART III: EU’S POLICY AND ADVOCACY PROGRAMME AND ACTIVITIES LANDSCAPE

4.1. MEP Mr Alojz PETERLE, Co-Chair, ENVI Health Working Group

Mr Peterle introduced the second panel with his personal experience as a cancer survivor, stressing how important a lifestyle change has been for him. He emphasised the distinction between government impositions and personal choices of individuals who decide to “master their own lifestyle” and argued that, in his opinion, the latter is essential.

4.2. Prof. Arno W. HOES, Chair, Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht; Co-Chairperson, 2016 European Guidelines on CVD Prevention in Clinical Practice, ESC Chairperson, Prevention Implementation Committee, EAPC

Prof. Hoes opened the second panel by presenting on how best practices in CVD medicine can be better shared. He introduced the ESC as an important organisation to promote the prevention of CVD and stated that improvements in CVD prevention in Europe should remain a high health priority for which a joint action of policy makers, health and care professionals and citizens is essential.

Prof. Hoes distinguished two different approaches to prevention that can be taken: one targeting high risk populations and the other one focusing on the whole population. The high-risk approach has more benefit at the individual level and is relatively cheap, as less people are targeted. The population-wide approach covers more people, but the individual benefit is lower, and individuals are less motivated. Prof. Hoes argued that the two approaches are complementary, and a combination of both at policy level is essential. The 2016 ESC European Guidelines on CVD Prevention in Clinical Practice have included a chapter on population-level prevention, recognising the importance for clinicians to be aware of the risk at population level. According to Prof. Hoes, healthcare professionals play an
important role in advocating evidence-based population-level interventions. Moreover, he argued that clinical prevention is more likely to be successful in environments that are supportive of a healthy lifestyle. A population-approach can take different forms including governmental restrictions and mandate, media and education campaigns, mandatory labelling and information, provision of economic incentives, and interventions delivered in schools, workplaces or community settings.

Prof. Hoes described a number of recommendations addressing risk factors such as smoking, alcohol consumption, diet and physical activity through the various forms of population-level interventions. Each recommendation had a score for its effectiveness and one for the level of evidence supporting the recommendation. For example, governmental mandates recommending considering physical activity incentives when planning new buildings or towns has been classified as extremely effective in increasing levels of physical activity. Prof. Hoes also demonstrated that smoking is the risk factor with the highest level of evidence recommending the application of governmental restrictions.

Prof. Hoes introduced the state of play of CVDs prevention across Europe and showed that in the past decades CVDs treatments have improved and risk factors’ identification have allowed more controls and better preventive interventions. However, currently EU citizens are doing worse than 3-4 years ago, with more people continuing to smoke and with the incidence of obesity increasing. He highlighted examples of best practices, such as national smoking bans, or the Finnish North Karelia Project, in which the Government achieved the result of significantly reducing mortality due to CVDs and the incidence of the diseases. However, Prof. Hoes stressed the fact that examples of “bad practice” are also important to highlight. Examples are doctors who smoke, or the decision of the Austrian government to allow people to smoke in restaurants after years in which smoking in close spaces had been banned.

4.3. Ms Susanne LØGSTRUP, Director, European Heart Network (EHN)

Ms Løgstrup presented the role of patient organisations in supporting the implementation of EU policies and started her presentation by agreeing with Prof. Hoes that CVDs need to be treated as a very high priority at EU level. The EHN plays a leading role in the prevention and reduction of cardiovascular diseases, in particular heart disease and stroke. They achieve this through advocacy, networking, capacity-building, patient support and research.

Ms Løgstrup stated that large inequalities in terms of CVDs exist at EU level. For example, between Bulgaria and France there is a 13-fold difference in death rates due to CVDs in women. She argued that as lifestyle choices are highly influenced by people’ surroundings, and that national governments and the EU have the duty to improve the environment in which people live. Ms Logstrup then covered some of the international and national directives addressing risk factors, such as the Tobacco Advertising Ban (2003), the Tobacco Products Directive (2014), the Tobacco Excise Duties (2010), the Nutritious and Health Claims (2003), the School Fruit Scheme (2009) and the Food Information to Consumers (2011). Moreover, the European Commission’s Common Agricultural Policy proposal (2018) included the objective to “improve the response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food...”.

Potential strategies that have proved to be effective in reducing smoking include the increase in taxes and prices on tobacco products, implementation of plain packaging and enforcing bans on tobacco advertising. Other interventions addressing unhealthy diets include the reformulation of food products to contain less salt, as well as front-of-pack labelling and the elimination of industrial trans-fats. Ms Løgstrup argued that, although the EU has a real competency in health, provided by Art 168 TFEU, it is currently missing a health strategy. She stressed that our future depends on our ambition in the interpretation of this article and development of a strategy to tackle chronic diseases.
4.4. Prof. Franco SASSI, Professor of International Health Policy and Economics, Imperial College London

Prof. Sassi focused his presentation on the projections of the likely future of CVD in Europe by 2050. Looking at the current population trends, Prof. Sassi showed that there will be a future life expectancy increase for both men and women. Prof. Sassi qualified that, although these are the best projections available, there is currently a debate where other studies have shown stagnation in life expectancy growth. According to Prof. Sassi, there is a strong argument in assuming that the most optimistic projections would prevail as, historically, projections of life expectancy growth have always been exceeded in reality. Together with an increase in life years, however, the prevalence and incidence of NCDs will also increase significantly.

Prof. Sassi presented four model scenarios of how changes in key determinants of health could have an impact on CVDs. He looked at the following elements as key determinants of health: Inequalities; Productivity and economic growth; Innovation in medicine and public health; Citizen empowerment; Climate change and decarbonisation; Demographic trends and migration; Urbanisation; Agriculture and global food chains. The results of the study however showed that in all cases there will be a significant increase in the number of new cases of CVDs, as well as a significant increase in healthcare expenditure. Moreover, Prof. Sassi highlighted that in the scenario in which we would implement all of the evidence-based EU-level policies to prevent risk factors, the effects relative to the worst scenario, is fairly minor. This means that the policies that we have been using in Europe only have a minimal effect in reducing the incidence of CVDs in Europe. Prof. Sassi concluded that we need to be much more effective in tackling these diseases at policy level.

Prof. Sassi then outlined the various policy options for preventing CVDs. These include for the government to increase the availability of healthy choices (e.g., bike sharing programmes); to influence established preferences (e.g., labelling of food); raising prices on unhealthy choices (e.g., taxes on alcohol and tobacco); or banning unhealthy behaviours (e.g., banning alcohol consumption in stadiums).

Prof. Sassi concluded the presentation restating that in all plausible future scenarios, CVD cases (both new and prevalent) will increase further in coming years, which will lead to increased morbidity, production losses and healthcare expenditures. Moreover, risk factors for CVDs are still widespread and in some cases are expanding, such as for obesity. In spite of this, the health policy response in Europe, both at national and EU level has been weak at best, and more needs to be done.

5. QUESTIONS AND ANSWERS

Prof. Wood asked a clarification question to Prof. Sassi on the true changes in incidence and prevalence when the data is adjusted for age and sex. Prof. Sassi answered that there are few estimates based on the assumption that the progress that we have made in reducing CVD rates will not go to continue and there will be a constant level of age-specific and gender-specific incidence showing the pure effect of changing demographics, with ageing and growing populations.

Mr Peterle asked Prof. Sassi about the rising prices of unhealthy choices, because he argued that we should reconsider the concept of “solidarity” with those who intentionally live a riskier life. He suggested for health insurances in Europe to start doing health profiles for individuals to pay different fees based on their lifestyle choices, asking what the role of insurances is and how can they influence the behaviour citizens making unhealthy choices. Prof. Sassi answered that in Europe there are no examples of this approach, but outside of Europe health insurance companies have charged extra premiums for clients that did not follow certain behavioural guidelines. He believes that this is a
promising area, but the issue would be how to monitor compliance with guidelines. Prof. Hoes said that the Netherlands tried to take this approach, but this caused a lot of criticism from the population, although he agrees that this should be at least put on the agenda. However, Ms Løgstrup argued that an approach like this one would lead to a further increase in health inequalities in CVDs. She reflected on the fact that insurances are based on a mutualisation of risk, and if we make it more expensive for people with the unhealthiest lifestyles, we might end up targeting people who are already in the lowest socio-economic groups and ending up double-penalising these people that already have other important problems to face.

Dr Navickas asked to the whole panel whether they believed that it is important to be transparent about measuring how well governments do in terms of preventing CVDs and improving lifestyle choices and sharing best practice with the community, possibly allowing patients to choose and putting pressure on the healthcare sector to provide high-quality outcomes. Prof. Hoes answered that transparency is essential to be able to share learning points and best practices. This is one of the reasons why the ESC has developed a website with data from all countries, to be able to compare countries’ performances and learn from both best and worst practices.

5.1. Closing Remarks

Mr Peterle MEP closed the workshop by stating that current CVD trends are an area of concern and that more needs to be done with the knowledge that we have. To do so, the EU needs to improve its ability to look at the bigger picture in a comprehensive health strategy, rather than focus on policies on single diseases. Mr Peterle concluded that awareness on health issues is growing within the EP, but that more policies should be developed to create an environment that enables people to take healthier choices.
The workshop aims to inform the Members of the ENVI Committee and all participants on the relationship between cardiovascular diseases and related diseases and a number of lifestyle choices in the context of the European Union. The workshop will be divided into two parts: the first part of the workshop will cover the most up-to-date scientific, medical and socio-economic research assessing the effects of lifestyle choices on CVDs, as well as the evidence supporting the link between a number of different risk factors and disease and treatment outcomes. It will also provide insights on the presence and reasons for different health outcomes within and between EU countries, and what has been done to close the gap and reduce the overall burden of CVDs. The second part of the workshop will provide an outline of the current EU policies, advocacy programme and activities landscape, highlighting the ones that are having the most significant impact on cardiovascular health outcomes.

AGENDA

9:00 – 9:10 Opening and welcome by the Chairs Ms Soledad CABEZÓN RUIZ (MEP) and Mr Alojz PETERLE (MEP)

Panel 1

9:10 – 9:20 Presentation by Dr Rokas NAVICKAS
Scientific Coordinator, CHRODIS+ Joint Action

The presentation will touch upon the impact of lifestyle factors on cardiovascular diseases.
**9:20 – 9:30** Presentation by Dr Steiner MADSEN  
*Medical Director, Norwegian Medicines Agency*  
The presentation will focus on population groups at higher risk of developing cardiovascular diseases.

**9:30 – 9:40** Presentation by Prof. David WOOD  
*Professor of Cardiovascular Medicine, Imperial College London*  
The presentation will cover the role of changes in lifestyle in reducing the burden of clinical treatment.

**9:40 – 10:00** Questions & Answers Session

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**Panel 2**

**10:00 – 10:10** Presentation by Prof. Arno HOES  
*Chair, Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht; Co - Chairperson, 2016 European Guidelines on Cardiovascular Disease Prevention in Clinical Practice, European Society of Cardiology (ESC) Chairperson, Prevention Implementation Committee, European Association of Preventive Cardiology (EAPC), ESC*  
The presentation will discuss the processes of discovering and dissemination of best practices in cardiovascular medicine.

**10:10 – 10:20** Presentation by Ms Susanne LØGSTRUP  
*Director, European Heart Network (EHN)*  
As the Director of the largest EU patient organisation for cardiovascular diseases, MS Løgstrup will discuss the role of the organisation, and its impact in supporting the implementation of EU policies and strategies for the prevention of CVDs.

**10:20 – 10:30** Presentation by Prof. Franco SASSI  
*Professor of International Health Policy and Economics, Imperial College London*  
The presentation will provide an overview of the European policy context impacting cardiovascular health in the EU

**10:30 – 10:50** Questions & Answers Session

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**Closing Session**

**10:50 – 11:00** Closing remarks by the Chairs Ms Soledad CABEZÓN RUIZ (MEP) and Mr Alojz PETERLE (MEP)
ANNEX 2: SHORT BIOGRAPHIES OF EXPERTS

Dr Rokas NAVICKAS

Dr Rokas Navickas is a highly accomplished Physician and Organization Leader with international training and global experience that reflects achievements across healthcare, wellness sector, research and education of Cardiology initiatives. Dr Rokas Navickas is Scientific Coordinator and Executive Board member at the CHRODIS PLUS joint action, which includes a number of EU countries, aiming to reduce chronic diseases burden through identifying, defining and sharing good practices across different healthcare settings. Rokas Navickas is also a consultant cardiologist at the Vilnius University Hospital, a position he has held since 2010. Prior to that he was a specialty trainee at the King’s College Hospital NHS Foundation Trust from 2008 and 2010, as well as a foundation trainee at the Oxford University Hospital NHS Trust. Mr Navickas has also been a board member of Lithuanian Heart Association. In addition, he is a fellow at the European Society of Cardiology and a member of the Lithuanian Hypertension Association. R. Navickas received his MD from the Vilnius University Medical Faculty, including elective studies in cardiology at Oxford University. In 2016 he received a Ph.D. from Vilnius University. Currently improves his knowledge at the London School of Economics and Political Science (LSE) as Executive Master of Science – EMSc, Health Economics, Outcomes and Management in Cardiovascular diseases.

Dr Steinar MADSEN

Dr Steinar Madsen (b. 1956) is medical director at the Norwegian Medicines Agency, a position he has held since 2000. He graduated from medical school at the University of Oslo in 1981. He specialised in internal medicine and cardiology and works part time as a consultant in cardiology. Before joining the Norwegian Medicines Agency, he worked at University of Oslo, Baerum Hospital and the National Hospital in Oslo. He was member of the committee that prepared the first public Norwegian guidelines for the prevention of cardiovascular disease in 2009 and also the second edition in 2017. At the Norwegian Medicines Agency, he is engaged in the medicines information service with a special interest in the cost-effective use of medicines, including generic and biosimilar drugs, with the aim of increasing access to treatment in the population.

Prof. David WOOD

Professor Wood is a cardiologist committed to prevention of cardiovascular disease and holds joint academic appointments at Imperial College, in London, and the National University of Ireland-Galway. He has contributed to international policy and guidelines on cardiovascular disease prevention through the World Health Organisation, World Heart Federation and the European Society of Cardiology. He was a founder and President of the European Association for Cardiovascular Prevention and Rehabilitation, a Board member of the European Society of Cardiology, where he served as Secretary/Treasurer, and in 2014 he was elected as President-Elect of the World Heart Federation and is currently serving his term as President 2017-2018. He is the principal investigator for the ASPIRE and EUROASPIRE studies across 27 European countries, evaluating standards of preventive cardiology practice in hospital and primary care. He led the EUROACTION and EUROACTION+ trials in preventive cardiology evaluating nurse-led models of preventive care in hospital and general practice across 8 European countries, and the principals of EUROACTION are now incorporated in the Imperial College NHS Cardiovascular Health programme for the NHS. He is Course Director for the Imperial College Masters’ degree programme in Preventive Cardiology providing education and training for doctors, nurses and allied health professionals. He is Senior Editor of the European Society of Cardiology Textbook of Preventive Cardiology and also founded the European Journal of Cardiovascular
Prevention and Rehabilitation (now European Journal of Preventive Cardiology) and served as the first Joint Editor in Chief.

**Prof. Arno W. HOES, MD, PhD**

Arno W. Hoes studied Medicine at the Radboud University in Nijmegen and obtained his PhD degree at Erasmus University Rotterdam on a thesis on sudden cardiac death as a side effect of diuretics in hypertension. He was trained in Clinical Epidemiology at Erasmus Medical Center Rotterdam and the London School of Hygiene & Tropical Medicine. In 1998 he was appointed professor of Clinical Epidemiology and General Practice at Utrecht University / University Medical Center (UMC) Utrecht. Since 2010, he has been the Chair/ Scientific & Medical Manager of the Julius Center for Health Sciences and Primary Care of the UMC Utrecht. His main research topics include the prevention of cardiovascular disease and the early diagnosis and management of cardiovascular disease, with an emphasis on heart failure. His teaching activities include courses on clinical epidemiology, diagnostic research, clinical trials, case-control studies and cardiovascular disease and prevention. He has (co-) authored over 600 papers in peer-reviewed journals and more than 50 PhD students completed their PhD thesis under his supervision.

**Ms Susanne LØGSTRUP**

Susanne Løgstrup is Director of the European Heart Network (EHN), a Brussels-based alliance of foundations and associations dedicated to fighting heart disease and stroke and supporting patients throughout Europe. She has worked on policies relating to the promotion of cardiovascular health and the prevention of cardiovascular diseases since 1995. Ms Løgstrup leads the development and implementation of EHN’s strategy and advises the Board of current EU thinking, and policies and programmes that have an impact on the work of the EHN and its members. She has led several major pan-European projects, including the European Heart Health Strategy II (2011-2014), part-funded by the EU. In 2017, EHN was awarded a Framework Programme Agreement which provides EHN access to operating grants from the European Union for a four-year period (2018-2021). Susanne Løgstrup represents EHN in the European Chronic Disease Alliance (ECDA), where she chaired the writing group on the Alliance’s first paper ‘A unified prevention approach’. Since 2016, she has been President of the Smoke Free Partnership (SFP). Ms Løgstrup represents EHN on the EC’s Platform for Action on Diet, Physical Activity and Health; she was a member of the EC’s TTIP Advisory Group where she represented health interests from 2013 to 2017 (when TTIP negotiations were suspended). Ms Løgstrup was also a member of the task force which produced the European Heart Health Charter (2007); this task force included representatives from the European Commission (EC) and the European Regional Office of the WHO. Previously, Susanne Løgstrup was an Attorney-at-law in Copenhagen and Paris. Ms Løgstrup’s academic background is in law and business administration, in which she holds master’s degrees. She is a Fellow of the European Society of Cardiology (FESC).

**Prof. Franco SASSI**

Franco Sassi is Professor of International Health Policy and Economics and Director of the Centre for Health Economics & Policy Innovation at Imperial College Business School, and formerly Head of the OECD’s Public Health Programme. His work aims at assessing the impacts of public policies to tackle major chronic diseases and their predisposing risk factors, including poor nutrition, physical inactivity, alcohol and tobacco use, environmental, and social risks. He is the author and editor of a large number of economic publications, including the books “Obesity and the economics of prevention: Fit not fat” and “Tackling harmful alcohol use: Economics and public health policy”.

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This document summarises the presentations and discussion taking place at the workshop organised by Policy Department A on the limits and opportunities of the Cardiovascular Disease and Lifestyle, held at the European Parliament, in Brussels.

The aim of the workshop was to inform the Members of the ENVI Committee and all participants on the relationship between cardiovascular and related diseases and a number of lifestyle choices in the context of the European Union, and to have an overview of the global and EU policy landscape addressing these challenges.

Firstly, leading experts in the field presented the most up-to-date scientific, medical and socio-economic research assessing the disease trends and the effect that lifestyle choices have on the outset and treatment of diseases. The various risk factors, health inequalities and how to focus more on a preventive approach were discussing, emphasising the best and worse practices across Europe.

The second part of the workshop focused on the current EU’s policy and advocacy programme and activities landscape, highlighting the ones that are having the most significant impact on cardiovascular health. Representatives from patients and professional organisations outlined the role that they have in promoting and implementing cardiovascular disease prevention and highlighted that more needs to be done be reduce the future incidence of cardiovascular diseases in the European Union.

This document was prepared by Policy Department A at the request of the Environment, Public Health and Food Safety Committee.