

Healthy Lifestyle and Preventive Health Checks: Determinants and Incentive Tools

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Expenditures related to treatment of chronic diseases caused as a result of unhealthy lifestyle represent a significant part of all healthcare expenses. The biggest challenges include unhealthy diet, lack of physical exercise, smoking and excessive consumption of alcohol. Another major part of healthcare expenditures includes costs that could be prevented by early disease detection within prevention programs. Therefore, accountability for one's health and the ways how the state can promote it are central topics of documents focusing on public healthcare policies in several developed countries of the world, including Germany, USA and the UK.

It is estimated that greater care of one's own health and participation in prevention programs lead to fewer health issues at an older age. This approach is supported by results of various studies conducted by experts who claim that state's involvement in personal healthcare can eventually result in lower healthcare expenditures¹¹.

1. What influences healthy lifestyle and participation in preventive health checks^{7,4,10}

Individual accountability for one's health and participation in various forms of prevention are predominantly influenced by socio-demographic and behavioural factors, as well as by current health condition and the influence of general/family practitioners.

Socio-demographic factors

Socio-demographic factors that influence one's accountability for their health include age, gender, marital status and social and economic status. Research has shown that attendance at preventive checks in adults is more likely to grow with increasing age (however, it starts to decrease again at old age) and that women generally attend preventive checks

more frequently than men. Attendance rate is strongly influenced by family background and marital status. Based on available studies, married or divorced persons attend preventive checks more frequently than single persons. As for social and economic background, persons from vulnerable social backgrounds often cannot afford healthy food and their attendance rate also tends to be lower.

Behavioural factors

According to published findings, healthy lifestyle is an important indicator of the way how a person addresses prevention and preventive checks. People who eat healthy and do not smoke tend to attend preventive checks more frequently than those with unhealthy diet and smokers, despite the fact that the likelihood of health issues is higher in the second group. It is interesting to look at how attendance at preventive checks influences subjective perception of health and the feeling of fear. Based on available qualitative studies, people are more likely to attend a preventive health check if there are sufficiently aware of the importance of the preventive check and if they clearly understand its benefits.

Exterior factors and the role of a general practitioner

The most important exterior determinants that have impact on healthy lifestyle and secondary prevention include incurred costs – direct (e.g. in some countries, preventive checks are not automatically reimbursed by public health insurance as they are in Slovakia) or indirect, i.e. travel expenses or expenses related to sick leave. In some peripheral regions, a significant factor that influences the attendance rate is the actual availability of preventive checks.

Several studies have pointed out at the importance of the role of general practitioners. General practitioner as a medical professional of first contact knows his patients, their family history, medical history and background. Therefore, they should be able to identify risk factors determining a more thorough monitoring of certain health indicators. In addition, general practitioners play a major role in the area of primary prevention and they are an important tool for the elimination of unhealthy habits, e.g. smoking, unhealthy diet and alcohol consumption. In the area of secondary prevention, general practitioners are an important factor for the understanding and explanation of the importance of preventive checks and their benefits.

2. Incentive tools in the area of health^{2,3,6,9,13}

There are several tools that the state can use to promote healthy lifestyle and participation in prevention programs. Apart from various information campaigns targeting specific social groups, this effort includes direct financial and non-financial incentives aimed at eliminating unhealthy habits or attending preventive checks. These attitudes are often supported by incentive schemes focused on medical doctors and primarily built on financial grounds both in the positive and negative sense. A common goal of incentive strategies is to convince people to modify their behaviour patterns, to adopt healthy lifestyle and to maintain a more responsible approach towards their health.

Incentive tools can be divided into the following categories:

- Awareness campaigns
- Financial incentive schemes
- Non-financial incentive schemes
- Incentive tools for medical doctors

Awareness campaigns

Awareness campaigns are probably the most common type of campaigns and they typically focus on the adoption of healthier habits and lifestyles. Awareness campaigns encourage people to quit smoking, improve their diet and exercise more. They are more effective if they are directed toward specific target groups and if they use adequate forms of awareness-raising and an appropriate selection of communication tools. In addition, experts have discovered that awareness campaigns have greater impact if they are implemented in combination with other measures. For example, in the case of smoking, such measures include controlling tobacco products consumption by banning smoking in public areas, banning advertisement or restricting cigarette sales.

Financial incentive schemes

The importance of financial incentive schemes lies mainly in their potential to reduce healthcare expenditures and to improve the quality of people's lives. Several studies have shown that financial support for healthcare increases the use of primary healthcare, participation in immunisation programs, screening of colon cancer, uterus cancer and breast cancer and improves compliance with treatment of tuberculosis and sexually transmitted diseases.

People are more likely to attend a health check or to participate in a screening program if it results in reduced healthcare costs and fees, if they get a free follow-up service or if they receive a reward. In some countries, health insurance agencies offer reduced health insurance premium if the insured person starts to exercise regularly and if they improve their condition if they suffer from a chronic illness.

Apart from positive financial incentives, negative schemes are also used as a tool for changing people's attitudes towards health. It should be said that negative schemes are not as common as positive incentive tools and they tend to be used in weight loss and smoking cessation efforts. For example, participants pay a deposit at the start of an intervention activity, which they get back after meeting pre-defined conditions, otherwise the deposit is lost. Similar incentives are used to reward workplace teams who quit smoking or to sanction teams if a member fails to do so.



Positive financial schemes

- Cash reward
- Vouchers, coupons (e.g. for meals, gym memberships)
- Raffle tickets
- Reduced health insurance premium

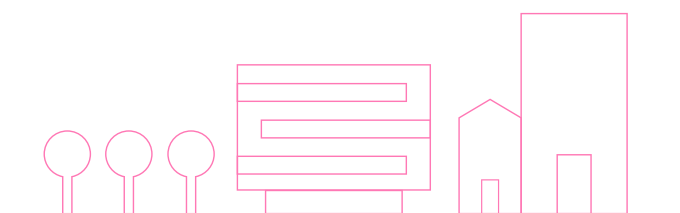
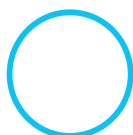


Negative financial schemes

- Removing a reward, deposit, sanction if desired behaviour is not demonstrated
- Sanctions for non-compliance with long-term treatment

Non-financial incentive schemes

Non-financial schemes are primarily based on the promotion of patterns and non-financial rewards for achieved objectives and in the long run, they can motivate and modify human behaviour towards a healthier lifestyle.





Positive non-financial schemes

- Raffle with attractive prizes (holiday, luxury items)
- Gifts (e.g. T-shirts, stickers)



Negative non-financial schemes

- Privileging patients who take care of their health in medical interventions
- Impossibility to demand better health insurance if one leads an unhealthy lifestyle

Benefits of financial and non-financial schemes

- Improved participation rate in vaccination programs, screenings and testing
- Improved compliance with treatment
- Demonstrable reduction in undesired behaviour rate
- Maintenance of long-term motivation
- Reduced total healthcare expenditures

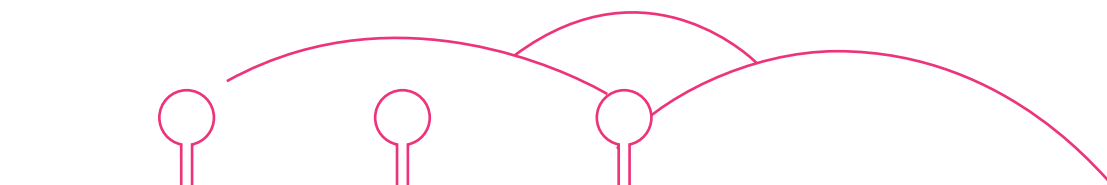
Incentive tools for medical doctors

In several countries, incentive programs are focused on increased efficiency of healthcare provided by medical doctors as well as hospital departments. Within such programs, medical doctors are rewarded for patients' participation in preventive programs, management of chronic diseases, clinical results, compliance with recommended practices, patient satisfaction, efficiency and the use of IT tools. Similarly to those designed for patients, incentives designed for medical doctors can be both positive and negative.

Effectiveness of incentive schemes

Studies have shown that **positive incentive schemes** focused on simple, short-term changes that are limited in time or one-time changes, such as a single visit for vaccination, are the most effective ones. Experts especially point out at the success of financial incentives targeted to low-income and risk groups, as well as psychiatric patients and long-term care patients. The situation is more difficult when it comes to smoking, weight control and physical exercise. In these cases, a more complex lifestyle change program is necessary, while the recess to bad habits is common after the end of the program. As for programs based on financial reward or raffle, the number of participants decreases with decreasing chances to win.

Research has shown that **negative incentive schemes** lead to greater success in the case of smoking cessation and weight control when compared to schemes with no incentive. However, from the long-term perspective, their success has not been confirmed.



What makes schemes successful?

- Financial benefit is part of a wider support scheme
- Financial benefit makes a certain type of healthcare accessible
- The size of financial reward or discount
- The size of deposit in negative schemes; higher deposit = higher chance of success
- The form of reward and the timing of receiving the reward
- Support of the environment
- Specific skills, knowledge and a certain level of confidence of program participants

Criticism of incentive tools^{1, 5}

Incentive schemes designed for the improvement of personal health are not perceived positively by all. Results of the effectiveness mapping of studies applying various incentive tools in the area of healthcare have shown that many people do meet the pre-defined objectives, however, once financial support is removed, they return to their former behaviour. Experts have also warned of poor effectiveness of paid prevention programs in comparison to voluntary activities. In general, incentive schemes are criticized due to the lack of evidence demonstrating their success, high costs of campaigns, potential misuse of the support or they are perceived as being too caregiving. In addition, critics consider financial incentive schemes to be a certain form of bribery by using public funds that could be used in a better way.

Examples of incentive schemes from abroad

Germany¹³

German incentive schemes have three fundamental objectives: to improve population health, to maximize efficiency of provided healthcare and to enhance competition between health insurance agencies. It is interesting to note that certain motivators have been incorporated into German legislation. For example, cancer patients who participate in screening programs are offered reduced co-payment for treatment or insured persons receive a partial refund for not using healthcare or for participating in specific treatment programs.

○ Rewarding accountability for one's health

Health insurance agencies can offer bonuses to insured persons who participate in support programs, screenings and preventive checks. Bonuses can be paid in cash, in the form of reduced insurance premiums or of gifts. For example, Bremer insurance company offers a special bonus program to children, teenagers and adults.

- **Dental healthcare**

Health insurance agencies typically refund 50% of costs related to dental care. However, this rate must be increased by 20 or 30% if the patient did not attend checks in the last 5 or 10 years.

- **Non-use of healthcare**

Health insurance companies offer decreased premium or supplementary payments to insured persons who minimize their use of healthcare (with the exception of preventive checks) or those who participate in specific chronic illness management programs. Financial bonuses for the non-use of healthcare can reach up to 100 euros.

United States of America⁸

In the US, there is a wide range of programs designed for the change of lifestyle habits and improvement of health. These programs are often implemented on the level of individual states or through health insurance companies.

- **Healthy lifestyle**

The aim of Wellness Incentives and Navigation in Texas is to improve individual health management and to lower the occurrence and impact of chronic diseases in people aged 18 to 64. Over the course of three years, participants receive 1,150 USD per year to achieve their personal health-related goals in a flexible way. Almost 1.5 million USD have been allocated for this program.

- **Smoking cessation**

Californian Medi-Cal Incentives to Quit Smoking (MIQS) are based on offering financial gift cards for enrolment in a prevention program a regular checks. The rewards range from 20 (participation) to 60 (first check) USD. In total, almost 450,000 USD have been allocated for this program.

- **Diabetes prevention, diabetes management, weight management and hypertension**

Medicaid Incentives for the Prevention of Chronic Diseases (MIPCD) program is managed by a Nevada-based state healthcare authority with a budget of more than 231,000 USD allocated for participants who meet pre-defined criteria. The maximum monetary value of incentives is 350 USD paid in the form of tiered bonuses.

The United Kingdom¹⁴

In the United Kingdom, various incentive programs designed to improve public health are commonly used by the state. Such activities are governed especially by NICE, the British public healthcare authority.

- **Healthy diet**

Pupils can receive points for eating healthy at school and exchange them for medical or school equipment within Save the Children International program. Children can also receive points or vouchers to be exchanged for cinema tickets, ipods, etc., if they maintain a healthy weight.

- **Overweight and obesity prevention**

Adult population pays lower monthly insurance premium for maintaining optimum BMI levels. Obese persons who get to the desired weight can receive 70 to 425 GBP.

- **Smoking cessation**

Young people who abstain from cigarettes for 28 days can receive a 15 GBP voucher. Similarly, pregnant women can receive a 20 GBP meal voucher for each week without smoking, 40 GBP after four weeks.

- **Mental disease management**

Patients suffering from psychiatric diseases receive a contribution of 5 to 15 GBP per injection.



3. Summary

The analysis of individual factors that contribute to healthier lifestyle or participation in preventive checks and other prevention programs is important especially from the perspective of effectiveness and functioning of individual public healthcare programs. Individual factors and their relation to healthy lifestyle and participation in preventive checks provide us with more information on the target group and on tools to be used within public healthcare policy within the particular target group. Available studies have clearly shown that there are similarities in factors influencing individual accountability for health. However, each community is different and countries should base their healthcare and prevention policies on the actual situation.

At the same time, healthy lifestyle and participation in prevention programs can be supported by the state by means of various incentive schemes (financial, non-financial, positive, negative) and awareness campaigns. Given the potential of savings and improved health, public healthcare programs in developed countries should take into consideration the possibilities of state aid designed to promote healthier lifestyle and participation in preventive checks. However, it is necessary to organize a discussion on an expert level to determine what tools are effective and to test individual incentive schemes, e.g. in the form of pilot programs.

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