

Economic Aspects of Prevention

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Original Article

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Abstract:

Economic aspects of prevention refer to the costs and benefits associated with measures aimed at preventing various problems and risks. Prevention can include measures aimed at preventing disease, crime, harmful behavior, environmental problems and other areas. There are several important economic aspects of prevention: cost reduction, productivity gains, social and human benefits and long-term sustainability. It is important to realize that prevention requires initial investments and often its economic impact is not immediately visible. However, a long-term evaluation of costs and benefits shows that prevention can be an economically beneficial strategy that brings a large number of socioeconomic benefits for the individual and society as a whole.

Biography of the first author

He was born in Bratislava. He graduated in Andragogy and Public Health. Professionally, he focused on the field of further education of health workers. He worked in the academic field for many years. He currently works in the private sector of healthcare. He is professionally engaged in clinical testing coordination in healthcare facilities, science and research, and connecting academia with the private sphere in the field of healthcare. He also works as a university teacher.

Introduction

The provision of healthcare includes five basic activities: prevention, diagnostics, therapy, rehabilitation and palliative care. Disease prevention is an extremely important aspect of society that has major economic consequences. Prevention is often divided into three basic groups: primary, secondary and tertiary. Primary prevention is obstructing the onset of disease, and it is precisely this type of prevention and its economic aspects that we want to focus on in this work. However, primary prevention has an unpleasant feature. Its results are usually noticeable after a long time, perhaps after tens of years, which of course involves the problem of how it is perceived by society. Therefore, a good setup and good preparation for the setup of preventive activities is very important so that after several years we do not find we have not achieved the expected results. This type of healthcare, even though it is relatively undemanding, represents a certain economic burden. In secondary prevention, which is based on early diagnosis and therapy, we see the results relatively early and can evaluate them as the recovery of the patient or stabilization of their health.

Costs and benefits of prevention

The costs of healthcare are fairly high in almost all countries and range from 5 to 10 percent of the gross domestic product, which understandably burdens the state budget or the budget of specialized facilities such as health insurance companies. Therefore, it is best and most economical if the disease does not occur, and this is precisely the role of primary prevention. The forms of this primary prevention range from health education to preventive interventions.

Chronic diseases cost the economy of the European Union 115 billion EUR or 0.8 percent of GDP. In the European Union, approximately 70 to 80 percent of annual healthcare is spent on the treatment of chronic diseases (1). This is also the reason why investments in health prevention can prove to be very beneficial and save precious public funds. Disease prevention can reduce treatment costs and enable patients to lead healthier and more productive lives. It can also reduce the rate of disability and the rate of unemployment, thus achieving a higher rate of employment, which can be reflected in economic stability. Disease prevention can also help to improve the productivity of the workforce because a healthy worker is less absent and less sick, which has a positive impact on economic performance. Health prevention can have a positive impact on social and environmental factors, which can have an overall positive impact on society. Barkasi (2017) claims that compared to the economic and social losses associated with the prevalence of civilization diseases, the costs of prevention and effective treatment of these diseases is significantly lower (2). Improved health also leads to a lower crime rate, a better quality of life and possibly to a reduction in environmental pollution. Investments in primary prevention are also beneficial from an economic point of view, as they contribute to a reduction of healthcare costs, an increase in work productivity and the improvement of social and environmental factors. We consider the benefits of prevention to be:

- reduced costs of treatment and increased productivity of the workforce, as prevention detects the disease before it occurs and takes effective measures to prevent it from occurring;
- improvement of the general health of the population will prevent the occurrence of diseases and may bring lower costs of treatment, save health insurance funds and is also beneficial for employees and employers by increasing productivity;
- illnesses and injuries lead to significant costs for the health sector, which can also be reduced by preventive activities; we will achieve lower costs for insurance contributions since healthy people need less healthcare, health insurance companies do not have to pay as much for medicines, hospitalizations and other treat-

ment procedures, thereby a reduction of public expenditure on the health of the population can be achieved;

- if people are healthier and more productive, they have fewer illnesses and injuries, that means fewer days spent off work, improving the performance of the workforce;
- improved health affects the quality of life of the population, people are happier, have more energy, and are more motivated to work and achieve their goals;
- improved health of the population can positively affect the country's economic indicators and thereby contribute to further economic growth.

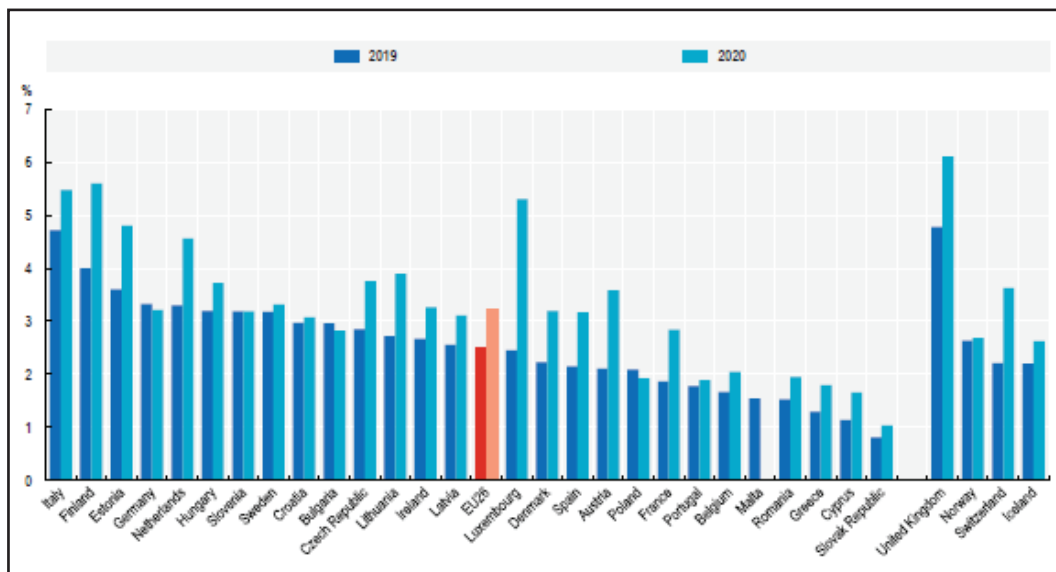
Comparisons of prevention in Slovakia and other EU countries

An international comparison of the costs of public health in 2019 and 2020 shows that Slovakia has a low health expenditure on prevention and appears almost at the bottom in the list of countries. The highest proportion of spending on prevention out of total healthcare costs is in countries such as Italy, Finland and Luxembourg, where this spending is at the level of 5 to 6 percent. In Slovakia, the share of prevention costs in total healthcare costs is roughly 1%, which is insufficient.

Prevention represents only a small share of the total expenditure on healthcare. Even after a strong one-off increase in 2020, which was mainly related to public health management during the COVID-19 pandemic (e.g., large-scale testing for the detection of the virus, pandemic surveillance and emergency coordination,), spending on preventive measures still represents only about 3% of total expenditure on healthcare (Fig. 1). Prevention serves mainly to obstruct the onset of disease. It also serves to detect diseases in their early stages, when they are still treatable. In Slovakia, preventive examinations and screening activities paid from public health insurance funds serve this purpose. An important condition for the success of preventive activities is the use of these activities by the population. Unfortunately, in many cases we encounter that preventive activities are not well received by the public and are not generally accepted. Citizens do not use the possibilities that preventive activities give them, whether in the field of public health or preventive activities carried out by medical facilities and medical workers. Preventive inspections are carried out in several fields and their contents and frequency are determined by legislation.

Preventive examinations of children and adolescents are traditionally the most popular in

Fig. 1 Share of prevention costs in total health spending, 2019-20



Source: OECD/European Union (2022), *Health at a Glance* (3)

Slovakia. In 2021, 864,137 preventive medical examinations of children and adolescents were performed, which represents 0.91 examinations per 1 person in the given age group. The development of the completion of these preventive examinations varies between 0.98 and 0.95 examinations per 1 person in the given age group.

The second most used are preventive examinations of the oral cavity by a dentist. In 2021, it was carried out in 2,350,482 inhabitants, which represents 0.45 examinations per 1 registered person in the given age group. It slightly decreased to 0.41 in 2020 due to the impact of the COVID-19 pandemic.

Gynecological preventive examinations were performed on 844,618 women, approximately 48 examinations per 100 women, including preventive examinations during pregnancy.

As for general practitioners for adults, the number of preventive examinations is relatively low, representing 811,657 people and around 35 examinations per 100 inhabitants in the given age group.

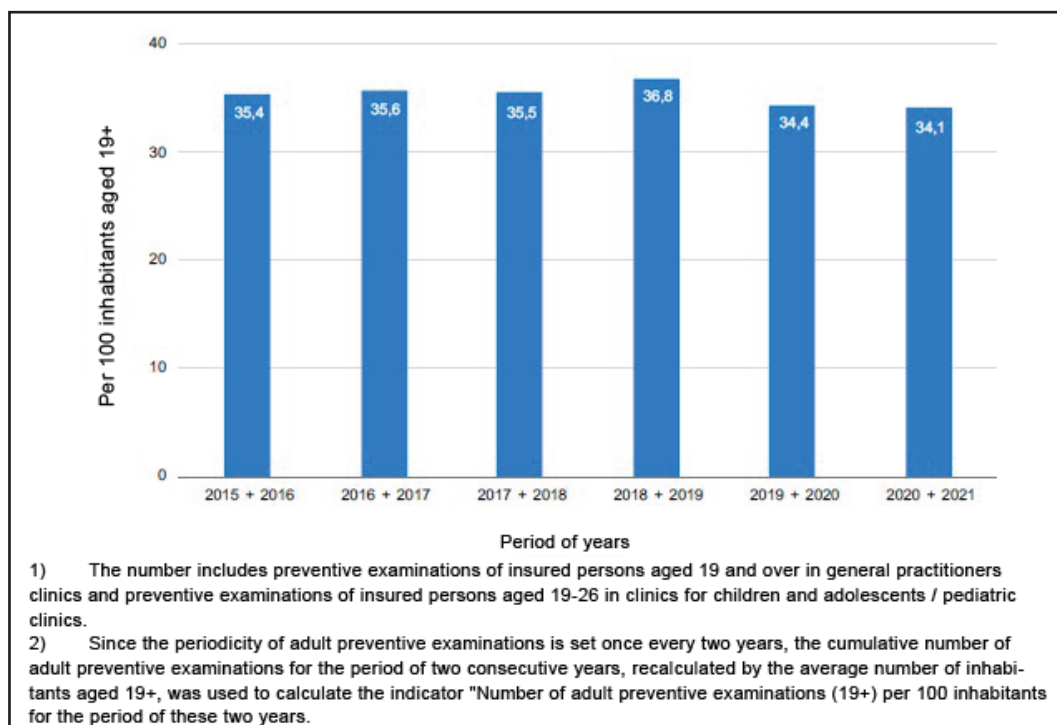
There are significantly lower numbers for preventive examinations by urologists and gastroenterologists. 62,430 urological preventive examinations and only 15,327 gastroenterological examinations were recorded (4).

These figures confirm that there are very few preventive examinations in Slovakia, and therefore one of the most important tasks for the future for all health authorities will be to increase the population's interest in prevention. In the health sector, more attention, time and energy should be devoted to the prevention of diseases, not only to the treatment of already existing diseases. There are countries where this area is more intensively addressed and it brings positive results through a lower morbidity rate (5).

Conclusion

What path should Slovakia take to improve the situation? It is necessary to radically increase the share of prevention costs in total health spending. We propose to increase funding by 0.5-1% per year up to at least a 4% share of total

Fig. 2 Development of the number of preventive examinations for adults¹⁾
(cumulative data for a two-year period)²⁾



Source: NCZI (2022)

health care expenditures. At the same time, the total expenditure on healthcare should rise to 8% of GDP. It is important to check the effectiveness of the methods used so far and to reevaluate the individual methods of primary prevention in terms of their effectiveness and impact on the Slovak population. That is, to increase the population's use of the benefits of prevention. In our opinion, the field of education fails the most in this because it starts very late. We think that health education should start with an individual subject in primary and secondary schools, perhaps even in kindergarten, so that children create healthy lifestyle habits on a daily basis. It is not only about acquiring knowledge about health, but primarily about acquiring healthy habits. We should also significantly increase participation in preventive examinations by economically stimulating residents to participate (as dentists have successfully done). We must modernize prevention methods and use marketing knowledge, mass media and social networks.

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