

Kozłowska Ewelina, Kowalczyk Anna. Diversified health insurance contributions in terms of medical condition and change of health behaviors – survey of select office workers group from Lublin region. *Journal of Education, Health and Sport*. 2017;7(9):332-340. eISSN 2391-8306. DOI <http://dx.doi.org/10.5281/zenodo.997482> <http://ojs.ukw.edu.pl/index.php/johs/article/view/4895>

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part B item 1223 (26.01.2017).

1223 Journal of Education, Health and Sport eISSN 2391-8306 7

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The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 15.08.2017. Revised: 10.09.2017. Accepted: 10.09.2017.

## **Diversified health insurance contributions in terms of medical condition and change of health behaviors – survey of select office workers group from Lublin region**

**Zróżnicowanie składki na ubezpieczenie zdrowotne ze względu na stan zdrowia a zmiana zachowań zdrowotnych - badanie ankietowe wybranej grupy pracowników biurowych z regionu lubelskiego**

**Ewelina Kozłowska<sup>1</sup>, Anna Kowalczyk<sup>2</sup>**

<sup>1</sup> Independent Epidemiology Unit, Medical University of Lublin

<sup>2</sup> Graduate of the Faculty of Health Sciences, Medical University of Lublin

**Address for correspondence**

Ewelina Kozłowska

Independent Epidemiology Unit, Medical University of Lublin

ul. Chodźki 1, 20-093 Lublin

e-mail: ewelina.kozłowska@umlub.pl

### **Summary**

**Introduction.** Health care is an important element of the policy of every State. Health in addition to the fact that is a value and measure to achieve better quality of life is also a resource for society, ensuring its social and economic development. Therefore, it is important to strive for development of such health care system, which will carry out health expectations and needs of citizens. Polish health insurance system is based on the principle of social solidarity, which guarantees equal access to healthcare services. The contribution shall be

calculated in proportion to the amount of earnings of the insured person, regardless of health status or individual risk factors.

**Aim.** Getting to know the opinion of selected group of professionally active persons on the impact of diversified health insurance contributions in terms of medical condition (the poorer medical condition all the higher contributions) and change of health behaviors.

**Material and method.** The study was conducted in the period of III-V 2014 among 937 office workers using diagnostic survey. The author's questionnaire form constituted the research tool. Collected material was subjected to statistical analysis using nonparametric  $\chi^2$  Pearson statistical test.

**Results.** Implementation of changes in calculation of health contribution would induce 67% of respondents for more frequent use of preventive tests. More than half of surveyed (59%) declared that would be able to change the way of feeding on healthier. It would also induce respondents for more frequent physical activity in different forms (57%). Almost half of surveyed (53%) answered that implementation of new calculation of contributions to the health insurance would motivate to give up smoking.

**Conclusions.** Diversified health insurance contributions in terms of medical condition would result among majority of respondents in resignation from unhealthy behaviors. The financial factor more often motivates men than women and persons with greater attention to their own health. The change of calculating contribution would affect the increase in frequency of using preventive examinations.

**Keywords:** *health insurance, health status, health system, health behaviors, office workers.*

## **Streszczenie**

**Wprowadzenie.** Ochrona zdrowia jest bardzo ważnym elementem polityki każdego państwa. Zdrowie poza tym, że jest wartością i środkiem do osiągnięcia lepszej jakości życia, jest również zasobem dla społeczeństwa, gwarantującym jego społeczny i ekonomiczny rozwój. Istotne jest dążenie do wypracowania takiego systemu ochrony zdrowia, który będzie realizował oczekiwania oraz potrzeby zdrowotne obywateli. Polski system ubezpieczenia zdrowotnego oparty jest na zasadzie solidaryzmu społecznego, który gwarantuje równy dostęp do świadczeń opieki zdrowotnej. Składka naliczana jest proporcjonalnie do wysokości zarobków osoby ubezpieczonej bez względu na stan zdrowia lub indywidualne czynniki ryzyka.

**Cel pracy.** Poznanie opinii wybranej grupy aktywnych zawodowo osób na temat wpływu zróżnicowania składki na ubezpieczenie zdrowotne ze względu na stan zdrowia (im gorszy stan zdrowia, tym wyższe składki) na zmianę zachowań zdrowotnych.

**Materiał i metoda.** Badanie przeprowadzono w okresie III-V 2014 r. wśród 937 pracowników biurowych stosując metodę sondażu diagnostycznego. Narzędzie stanowił autorski kwestionariusz ankiety. Zgromadzony materiał poddano analizie statystycznej nieparametrycznym testem statystycznym  $\chi^2$  Pearsona.

**Wyniki.** Wprowadzenie zmian w sposobie naliczania składki zdrowotnej skłoniłoby 67% ankietowanych do częstszego korzystania z badań profilaktycznych. Ponad połowa badanych (59%) zadeklarowała, iż byłaby w stanie zmienić sposób odżywiania na bardziej zdrowy. Skłaniałoby to również ankietowanych do częstszego uprawiania różnych form aktywności fizycznej (57%). Blisko połowa badanych (53%) odpowiedziała, że wprowadzenie nowego sposobu naliczania składek na ubezpieczenie zdrowotne motywowałoby do rezygnacji z palenia tytoniu.

**Wnioski.** Zróżnicowanie składki na ubezpieczenie zdrowotne ze względu na stan zdrowia skutkowałoby wśród większości badanych rezygnacją z antyzdrowotnych zachowań. Czynniki finansowy częściej motywuje mężczyzn niż kobiety oraz osoby wykazujące się większą dbałością o własne zdrowie. Zmiana sposobu naliczania składki wpłynęłaby na wzrost częstotliwości korzystania z badań profilaktycznych.

**Słowa kluczowe:** *ubezpieczenie zdrowotne, stan zdrowia, system ochrony zdrowia, zachowania zdrowotne, pracownicy biurowi.*

## **Introduction and aim**

Health care is a very important issue - political society of each country. The functioning of the health system is derived primarily from the accumulated funds, but also of how they are spending and the health care needs determinowanych by the state of health of the citizens. [1]

Health is a holistic potential physical, mental, spiritual and intellectual unit allows satisfactory conduct her life, under certain conditions, culturally - social [2]. The strategy of WHO "Health for all by the year 2000" highlights that health is a value by which an individual can realize their aspirations, is a means to achieving a better quality of life, as well as a resource for society, guaranteeing the social and economic development [3]. The ability and the ability to effectively perform social roles and to adapt to changing environmental conditions of life [4]. For this reason, it is essential to develop such a health care system that will be in the highest degree and meet the expectations of the health needs of the citizens.

There are four determining areas of human health. According to the model "Health fields" Marc Lalonde real impact of health care on health is only a small and fluctuates around 10%. The impact of environmental factors, was estimated at approx. 25% and genetic factors on approx. 15%. According to M. Lalonde and his later followers essential to overall health are elements of the style of life of the individual (50%). Health behavior as a component of lifestyle are thus a major determinant of health [5].

According to the definition of I. Heszen and H. Sęk, health behaviors are "reactive habitual and targeted forms of human activities, which are at the basis of knowledge of objective and subjective belief significantly, mutual health reasons" [6]. Health behaviors are any activity unit which is part of everyday life, affecting her health, carried out under a relatively individual choices and decisions [7]. There are health behaviors, showing a positive correlation with health, maintaining favorable, strengthening and restoring health and anti-health behavior, adversely affecting the health, hindering the prevention, course of treatment, which increase the risk of illness or loss of efficiency [6].

Although health behaviors are a team of health determinants, over which a person can exercise control to the greatest extent, it possessed the knowledge and beliefs conducive to health does not explicitly define these activities [7]. Health education experience suggests that transmission of knowledge, and therefore activities aimed at cognitive realm is not producing results in the form of behavioral change. The process of changing the behavior usually takes place in several stages: determination of the end, motivation, the decision of a certain consistency in maintaining and sustaining its [8]. It is important to seek solutions that will encourage people to give up unhealthy behaviors for behaviors that promote health. This is advantageous from the point of view of the individual, but also the system as a whole.

The aim of the work is to know the opinion of a select group of economically active people on the impact difference in the level of health insurance contributions due to the state of health (the worse the state of health, the higher the premium) on selected health behaviors.

### **Material and method**

The survey was conducted in the period from March to May 2014. Among 937 economically active persons. For the purposes of this work has been used a method of diagnostic survey and polling technique, which consists of filling examined by specially developed questionnaires that enable knowledge of the test object.

A survey of office workers employed in the Lublin province, in institutions such as City Halls, County Offices, Offices Municipalities, universities, the Statistical Office, the Social Insurance Institution, Agricultural Social Insurance Fund. The study involved 669 women (71.4%) and 268 men (28.6%), aged 22-64. The average age was  $40.96 \pm 10.57$  years. For research purposes surveyed assigned to three age groups: 22-34 years (35%), 35-45 (31%) and 46-64 years of age (34%). Half of the respondents resident province city (51%, N = 476).

The research tool used in the present work was the original interview questionnaire, consisting of well-defined open and closed questions and specifications. The collected material was subjected to statistical analysis of non-parametric statistical test  $\chi^2$  Pearson. For requesting the level of significance of  $p < 0.05$ .

## Results

The results showed that the diversity of health insurance contributions due to the state of health (the worse the state of health of the higher premiums) would result in the elimination of the majority of respondents improper eating habits (59.45%). Financial factor motivate more men than women (65.67% vs. 56.95%). The differences in responses by sex are statistically significant ( $p = .014$ ).

More than half of respondents (57.89%) stated that the change in the method of calculating the contribution of health skłoniłaby to more frequent physical activity. Increasing physical activity due to the financial factor often declare males (63.06%) and those in the younger age group (22-34 years). The differences in responses by gender and age is statistically significant ( $p = .04$ ,  $p = .004$ ). The study shows that the tendency to change their lifestyle to a more active decreases with age (64.85%, 55.67%, 52.66%).

Respondents were also asked about the impact of changes in the frequency of calculating the contribution to the use of prophylactic examinations. Changes in the method of calculation of the health premium would convince 67.13% of the respondents to make greater use of preventive medical examinations. The answers did not differ by sex and age ( $P = 0.6333$ ;  $p = 0.848$ ). The percentage of people willing to make greater use of preventive testing differed significantly ( $p = .00002$ ) among people who so far have already benefited from the screening, people who would like to participate in such a study, and those who do not intend to apply for research even if You will receive a personal invitation (respectively 82%, 73%, 52%).

More than half of the respondents (53.68%) answered that the introduction in Poland, a new way of calculating insurance premiums would spur reduce or forgo tobacco - much

more on this answer pointed men than women ( $p = 0.004$ ). The responses observed differences determined by age. People aged 22-34 years, the answer often indicated that a higher health premiums may lead to the resignation of addiction compared to those aged 46-64 (58.72% vs. 49.84%), but they are not significant differences ( $p = 0.064$ ).

Table I. Opinions on office workers effect of the variation amount of the contribution for health insurance because of health status (the worse the state of health of the higher premiums) on selected health behavior.

Variables		Eliminating improper eating habits			More frequent physical activity			Giving up smoking			More frequent use of preventive examinations			TOTAL		
		Yes	No	P	Yes	No	P	Yes	No	P	Yes	No	P			
Sex	Woman	n	381	288	0.01	373	296	0.04	335	334	0.0004	446	223	.6333	669	71.4
		%	56.95	43.05		55.75	44.25		50.07	49.93		66.67	33.33			
	Man	n	176	92		169	99		168	100		183	85		268	28.6
		%	65.67	34.33		63.06	36.94		62.69	37.31		68.28	31.72			
Age	22-34	n	199	128	0.668	212	115	0.004	192	135	0.064	218	109	0.848	327	34.9
		%	60.86	39.14		64.83	35.17		58.72	41.28		66.67	33.33			
	35-45	n	167	124		162	129		152	139		193	98		291	31.06
		%	57.39	42.61		55.67	44.33		52.23	47.77		66.32	33.68			
	46-64	n	191	128		168	151		159	160		218	101		319	34.04
		%	59.87	40.13		52.66	47.34		49.84	50.16		68.34	31.66			
TOTAL	n	557	380	542	395	503	434	629	308	937	100					
	%	59.45	40.55	57.84	42.16	53.68	46.32	67.13	32.87							

## Discussion

Financing of the health care system is a very important political and social issue each country. Health insurance is the dominant source of funding for health care in Poland and in most European Union countries. Polish health care system functioning after World War II was modeled on the Soviet model Siemaszko, whose main objectives was strong centralization, lack of private sector in health care financing and budget. In 1998. It began the process of transforming the health care system in Poland Bismarck system. The main changes concerned

the introduction of compulsory health insurance and separation of functions payer for health services from their provider and organizer [1].

Polish health insurance system is based on the principle of social solidarity. With art. 68 paragraph. 2 of the Constitution that, all citizens have equal access to health care services financed from public funds, irrespective of their material situation. The main source of funding for the health care system in Poland is health insurance in the National Health Fund (NFZ). Legally employed persons are covered by compulsory insurance premiums representing 9% of personal income. The amount of the contribution is calculated in proportion to the amount of income of the insured person regardless of age, health or individual risk factors, ie. Age, sex, previous illnesses, occupational risk. Risk factors are distributed to all insured [9,10].

State of health is determined largely by individual human decisions and choices. Anti-health behavior such as smoking, not using the primary prevention trials, alcohol consumption activities are presenting health risks in the future. A lot of people say that health is the supreme value, but far fewer people take adequate measures conducive to health. Health behavior only to a certain extent, they depend on the individual informed decisions. The different groups are diverse in terms of knowledge of the factors affecting health, and therefore it is important to health education addressed to all social groups. While knowledge about the determinants of health and to have practical skills are a fundamental issue in making informed decisions and choices related to health, however, possessed knowledge does not directly appoint these activities. It seems necessary to use effective motivating factors in terms of taking care of their capital health.

In the discussion about the calculation of premiums for health insurance, taking into account the state of health should be taken into account that according to estimates of health behavior health condition of approx. 50%. The remaining percentage of the state of health determined by other factors not related to individual human behavior, ie. environmental conditions, living, working, biological agents, health care, on which a single unit is not affected. The aim is to develop solutions that will motivate citizens to take care of health. It may be useful the use of the motivating factors that respond to specific behaviors desired. An example would be to reduce health insurance premiums for people taking certain behaviors conducive to health (eg. use of primary prevention trials).

## Conclusions

1. The results show that differences in health insurance premiums due to the health condition would result in a tendency among the majority of respondents to the resignation of behavior harmful to health.
2. The financial factor motivates men more often than women and persons with greater attention to their own health.
3. Changing the method of calculation of the contributions affected the increase in frequency of use of prophylactic examinations.
4. In the discussion about the calculation of premiums for health insurance, taking into account the state of health should take into account the fact that health is determined by the factors not related to individual human behavior, on which a single unit is not affected.
5. Consider using motivating factors that will reinforce certain behaviors desired. An example would be to reduce health insurance premiums for people taking certain behaviors conducive to health (eg. use of primary prevention trials).

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