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## Zaprzestawanie palenia papierosów przez pacjentów leczonych na oddziałach szpitalnych

## Frequency of smoking cessation among patients treated in selected hospital wards

### Streszczenie

Wprowadzenie. Leczenie szpitalne może sprzyjać zaprzestaniu palenia papierosów.

Cel. Celem badań była ocena częstości zaprzestawania palenia papierosów przez chorych leczonych na wybranych oddziałach szpitalnych oraz stwierdzenie, czy osoby zaprzestające palenia papierosów różnią się pod względem cech demograficznych od osób nadal palących.

Metodologia. W badaniach uczestniczyło 205 losowo wybranych osób, leczonych szpitalnie od lipca 2003 roku do lipca 2004 roku, palących papierosy bezpośrednio przed leczeniem szpitalnym, hospitalizowanych na 5 oddziałach: oddziale chorób wewnętrznych, oddziale neurologicznym, oddziale chirurgicznym, oddziale okulistycznym i oddziale neurochirurgicznym. Każdy chory wypełniał ostatniego dnia leczenia szpitalnego anonimowy kwestionariusz. Kwestionariusz zawierał pytania dotyczące palenia papierosów oraz danych demograficznych.

Wyniki. Podczas pobytu w szpitalu przestało palić 33% badanych. Najwyższy odsetek pacjentów, którzy zaprzestali palenia stwierdzono na oddziale neurologicznym (47%) i neurochirurgicznym (47%), najniższy na oddziale okulistycznym (19%).

Wnioski.

1. Stwierdzono, że 33% osób leczonych szpitalnie zaprzestaje palenia papierosów w okresie hospitalizacji.

2. Najwyższy odsetek osób rzucających palenie był wśród leczonych na oddziale neurologicznym i oddziale neurochirurgicznym, najniższy na oddziale okulistycznym.

3. Osoby, które rzuciły palenie podczas hospitalizacji nieznacznie różniły się od osób nadal palących pod względem danych demograficznych, można sądzić, że istnieją inne czynniki niż demograficzne wpływające na zaprzestanie palenia przez chorych.

**Słowa kluczowe:** uzależnienie od tytoniu, zaprzestanie palenia papierosów.

### Summary

Introduction. Hospital treatment can be a favourable opportunity for smoking cessation.

Aim. The aim of our study was to evaluate the rate of smoking cessation among patients treated in selected hospital wards and to establish whether the patients who quit smoking and those who did not, differ in demographic features.

Methodology. 205 randomly selected smoking patients, hospitalized since July 2003 to July 2004 were examined. They were hospitalized in 5 wards: internal, neurological, surgical, ophthalmology and neurosurgery. Each patient, on the last day of his or her hospitalization, filled an anonymous questionnaire. The questionnaire contained questions concerning demographical data and smoking patterns.

Results. 33% of the examined patients quit smoking during their hospitalization. The highest percentage of patients who ceased smoking was observed in the neurology ward (47%) and in the neurosurgery ward (47%), while the lowest was found in the ophthalmology ward (19%).

Conclusions.

1. It has been established that 33% of the patients quit smoking during hospitalization.

2. The highest percentage of patients who quit smoking was observed in the neurology and neurosurgery wards, and the lowest in the ophthalmology ward.

3. Patients who stopped smoking during hospitalization differed slightly from those who continue to smoke in terms of demographic data, so there may be demographical factors that influence smoking cessation rates in patients.

**Key words:** tobacco addiction, smoking cessation.

## INTRODUCTION

Research shows that 40% of men and 20% of women in Poland smoke regularly [1].

Smoking causes strong psychological, behavioral and physical addiction, which causes many health and social dysfunctions not only among smokers themselves but also among passive smokers. Research shows that smoking is the cause of three million deaths per year, and it is estimated that this figure will rise to 10 million by 2020 [2].

Long-term smoking is not only conducive to serious somatic diseases but may also intensify their symptoms and impede therapy. It seems desirable for smoker to stop smoking during hospitalization, for example before surgery (of course it would be optimal if this cessation was permanent). By quitting smoking patients would reduce the risk of tobacco related complications, particularly the risk of respiratory and cardio-vascular complications. Also, the risk of complications related to injury healing is reduced [3].

Smoking cessation can occur spontaneously or thanks to routine pre-surgery interventions prepared by the medical staff. Hospital stay is an important event in the life of the patient, frequently increasing effectiveness of smoking cessation and can be a start of long-term abstinence [3]. It turned out that persons who ceased smoking during hospitalization remain abstinent for over a year more frequently than those who quit smoking for other reasons [4].

## METHODOLOGY

The aim of the research was to examine the frequency of smoking cessation in patients treated at selected hospital wards and to establish whether patients who quit smoking differ from those who did not in terms of demographical features.

Participants. 205 randomly selected, smoking patients, hospitalized between July 2003 and July 2004 were examined. They were treated in 5 wards: Internal Ward of the General Hospital in Ostróda (46 persons), Surgery Ward of the General Hospital in Kartuzy (34 persons), Ophthalmology Clinic of the Academic Clinical Hospital in Bydgoszcz (57 persons), and in 2 wards of SP ZOZ in Bydgoszcz – Neurology and Epilepsy treatment (38 persons) and Neurosurgery (30 persons).

An independently constructed, anonymous questionnaire was used. The questions concerned demographical data, smoking patterns and the length of hospitalization. The research was carried out on the last day of hospitalization. The study was approved by the Bioethics Commission of Ludwik Rydygier Collegium Medicum in Bydgoszcz.

## RESULTS

Table 1 shows basic demographical data of 205 persons examined. According to Table 1, 67 (33%) out of 205 examined persons quit smoking during hospitalization.

Table 2 shows a comparison of percentages of persons who quit smoking during treatment on selected hospital wards.

As it can be seen in Table II, the lowest cessation rate was observed among the patients treated in the ophthalmology

**TABLE 1. Basic demographical data and the frequency of smoking cessation in the examined group of 205 patients treated in selected hospital wards**

Variable	Value (n)	Percentage (%)
Age (years)	50±15	18-84
Sex		
Women	74	36
Men	131	64
Marital status		
Free	63	31
Married	142	69
Education		
Primary	38	19
Vocational	57	28
Secondary	87	42
University	23	11
Work status		
Unemployed	31	15
Employed	83	41
On pension/Retired	91	44
Place of living		
Country	58	28
City	147	72
Smoking		
Stopped smoking	67	33
Continued smoking	138	67
Length of hospitalization (days)	8±4	2-21

**TABLE 2. Comparison of the percentages of persons who ceased smoking during treatment in selected hospital wards**

	Smokers	Stopped smoking	Rate of cessation (%)
Internal ward	34	12	26 <sup>a, b</sup>
Neurology ward	20	18	47
Ophthalmology ward	46	11	19 <sup>c, d, e</sup>
Surgery ward	22	12	35
Neurosurgery ward	16	14	47

<sup>a</sup>difference between the internal ward and neurology ward, Chi<sup>2</sup> test, p=0.036; <sup>b</sup>difference between the internal ward and neurosurgery ward, Chi<sup>2</sup> test, p=0.055; <sup>c</sup>difference between the ophthalmology ward and neurology ward, Chi<sup>2</sup> test, p=0.004; <sup>d</sup>difference between the ophthalmology ward and surgery ward, Chi<sup>2</sup> test, p=0.075; <sup>e</sup>difference between the ophthalmology ward and neurosurgery ward, Chi<sup>2</sup> test, p=0.006.

ward (significantly lower than in the neurology and neurosurgery wards) and the internal ward (significantly lower than in neurological ward).

In the next phase of result analysis, demographical data and hospitalization times of the patients who stopped smoking during treatment and those who did not, were compared for each ward. It was found that in the internal ward 2 out of 10 examined women and 16 out of 26 men had stopped smoking (20% vs. 39%, Chi-square test, p<0.05); in the neurosurgery ward, the patients who quit smoking were older

than those who did not ( $52\pm 10$  vs.  $46\pm 11$  years, t-Student test,  $p<0.1$ ); in the ophthalmology ward, no patient with primary or university education has stopped smoking (primary education – 0%, vocational education – 27%, secondary education – 73%, university education – 0% vs. primary education – 20%, vocational education – 33%, secondary education – 30%, university education – 17%, Chi-square test,  $p<0.05$ ); in the surgery ward, the patients who stopped smoking during hospitalization required shorter treatment than those who continued to smoke ( $8\pm 2$  vs.  $10\pm 4$  days, t-Student test,  $p<0.05$ ). No significant differences were observed among the patients, treated in the neurosurgery ward, who ceased to smoke and those who continued smoking.

## DISCUSSION

In three wards examined by us, surgical procedures were carried out (surgery ward, ophthalmology ward, neurosurgery ward) and in two wards, surgical procedures were not carried out (internal ward, neurology ward). The results show that a surgical procedure performed on smokers carries a greater risk of complications than on non-smokers [3]. Thus, it seems reasonable to inform patients, especially those, who suffer from tobacco related diseases, about possible complications and the necessity of sustaining nicotine abstinence.

Hospital treatment seems to be a favorable condition for a decision to quit smoking [4]. It turns out that about 10-15% of patients who have quit smoking after hospital treatment report 1 year of nicotine abstinence, while this percentage is only 3-5% in the general population [4]. We have established that the rate of smoking cessation is 33% among the hospitalized patients. This result coincides with other research, which shows that about 20-30% of smokers want to quit smoking each year [5], hospitalization is a good opportunity for this, but abstinence can last only a short time, and only few people are able to withstand 12 months. A relatively high rate of cessation observed in our research could also be a result of the fact that the use of cognitive psychotherapy in nicotine addiction treatment, for example reminding about gains derived from smoking cessation (motivation – recovery), gives better results than merely denying oneself smoking and believing that cessation is possible (conjoined with a smoking ban in the hospital) [6].

In the group, that quit smoking during their treatment in the internal ward the majority were men. According to other research, men more frequently than women decide to quit smoking [9].

Our research shows that the majority of patients who quit smoking were treated in the neurosurgery and neurology wards. One can presume that such a high rate of smoking cessation (47%) results from the fact that conditions which were the cause of hospitalization could prevent patients from smoking regardless of their motivation (skull trauma, brain circulation disorders). In addition, explanations for this include other surgery-related difficulties in smoking (neurosurgery ward) or impaired mobility (neurology ward).

The smallest smoking cessation rate was observed in the ophthalmology and internal wards. This could be a result of work organization in those wards and the nature of medical conditions treated there.

It has been observed that the length of hospitalization in the surgery ward was statistically shorter for non-smokers than for smokers. This would confirm other research claiming that smoking cessation reduces the risk of post-anesthesia complications, accelerates healing rate of injuries and convalescence – especially in cardio-vascular cases [3].

A trend we observed: that persons who quit smoking while being treated in the neurology ward were older than those who continued to smoke, requires further investigation. It is possible that the condition of patients who decided to quit smoking was relatively worse than of those who continued smoking, and it could be theoretized that people in a worse condition more frequently decided to quit smoking.

Our research has also shown that the level of education has no influence on the cessation rate. This is especially apparent among patients treated in the ophthalmology ward, where not one person with either elementary or university education ceased smoking. Studies on the relation between smoking and the level of education show that smoking frequency is inversely proportional to the level of education, but does not change with an increasing awareness of health damage caused by smoking [7]. This can be confirmed by studies on smoking frequency in medical staff (doctors and nurses) [8]. Consequently, it seems that a higher awareness of health damage caused by smoking does not significantly influence the cessation rate in patients of the ophthalmology ward.

Persons strongly addicted to nicotine belong to a group for whom smoking cessation is exceptionally difficult [10]. Relatively few of them are able to achieve long-term nicotine abstinence or to reduce smoking without methods allowing them to reduce nicotine hunger [11].

Hospital treatment, in the face of such a high rate of cessation (33%), is a good opportunity for interventions inducing and sustaining nicotine abstinence. However, the need to include persons who did not quit smoking due to a medical condition and hospitalization in “anti-nicotine” prevention should not be overlooked.

## CONCLUSIONS

1. It has been established that 33% of the hospitalized patients quits smoking during hospitalization.
2. The highest percentage of the patients who quit smoking was observed in the neurology and neurosurgery wards, and the lowest in the ophthalmology ward.
3. The patients who stopped smoking during hospitalization differed slightly from those who continued to smoke in terms of demographic data, so there may exist demographical factors that influence smoking cessation rates of patients.

## REFERENCES

1. Zatoński W. Demokracja jest zdrowsza. Warszawa: Centrum Onkologii - Instytut w Warszawie; 1999.
2. DiClementem CC, Prochaska JO, Gilbertini M. Self-efficacy and the stages of self-change of smoking. *Cognit Ther Res* 1985;9(1):81-200.
3. David O, Warner MD. Preoperative smoking cessation: the role of the primary care provider. *Department of Anesthesiology, Mayo Clin Proc* 2005;80(2):252-258.

4. France EK, Glasgow RE, Marcus AC. Smoking cessation interventions among hospitalized patients: what have we learned? *Prev Med* 2001; 32: 376-388.
5. Zatoński A. Decreasing Smoking in Poland: The Importance of a Comprehensive Governmental Policy. *J Clin Psychiatry Monograph* 2003; 18(1):74-82.
6. Sutton SR. Social psychological approaches to understanding addictive behaviours. *Br J Addict* 1987;82:355-370.
7. Grzonkowski S, Jasiński B. Uwarunkowania zmian w nałogu palenia papierosów przez populację. *Zdr Publ* 1992;103(2):80-87.
8. Grzonkowski S, Szcześniewska D, Piwoński J. Palenie tytoniu wśród pracowników kardiologii. *Zdr Publ* 1992;103(2):94-99.
9. Pierce JP. International comparisons of trends in cigarette smoking prevalence. *Am J Public Health* 1989;79:152-157.
10. Carmody TP. Nicotine dependence: psychological approaches to the prevention of smoking relapse. *Psychol Addict Behav* 1993;7:96-102.
11. Dou R, Peto R, Wheatley K. Mortality in relation to smoking: 40 years observations on male British Doctors. *BMJ* 1994; 309: 901-910.

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