

## SUMMARY

**Title of the work:** Analysis of selected health-promoting actions in the daily practice of primary care physicians in the Podkarpackie Voivodeship.

**Introduction.** Conducting effective health promotion activities, including health education, is currently one of the most important challenges for the healthcare system. Non-communicable chronic diseases account for nearly 80% of deaths in Poland, and their occurrence is mainly associated with lifestyle risk factors (such as improper diet, low physical activity, excessive body weight, use of stimulants). Primary health care is the main and fundamental element of the healthcare system in Poland and is the first point of contact for patients with the healthcare system, with primary care physicians playing a particularly important role as guides for patients through this system and having the most frequent contact with them and their families. Educational activities conducted by primary care physicians can bring tangible benefits in the clinical, financial, and social spheres, and patient education on behavioral risk factors for chronic diseases can have a significant impact on maintaining and improving the health of the entire population.

**Aim of the study.** The main objective of the study was to assess the frequency of advice provided by primary care physicians on dietary habits, physical activity, and weight control in adult patients, from the perspective of both physicians and patients.

**Materials and methods.** The study was conducted using a diagnostic survey method utilizing interview and questionnaire techniques, using two anonymous survey questionnaires: a standardized survey questionnaire for primary care physicians and an author-designed survey questionnaire for patients. The study was conducted from 01.12.2016, to 30.01.2020, in randomly selected 83 public and private primary care clinics in the Podkarpackie Voivodeship. The study sample consisted of primary care physicians and healthcare service recipients from the primary health care sector, residents of the Podkarpackie Voivodeship divided into 25 counties. The study involved 309 primary care physicians and 1023 patients receiving consultations from a primary care physician practicing in a selected facility. Quantitative variable analysis was performed by calculating the mean, standard deviation, median, and quartiles. Qualitative variable analysis was conducted by calculating the number and percentage of occurrences of each value. Comparison of qualitative variable values between groups was performed using the chi-square test or Fisher's exact test. The analysis was conducted using the R program, version 4.3.1.

**Results.** Close to 40% of primary care physicians surveyed declared that they only occasionally assess their patients' diets, while approximately one-third of the surveyed physicians (32.36%) stated that they often perform such assessments. Less than half of the primary care physicians surveyed (45.95%) declared that they frequently provide their patients with advice on proper nutrition, with

only 5.85% of respondents stating that they rarely recommend dietary changes to their patients. Half of the primary care physicians (50.81%) indicated that they only occasionally assess the level of physical activity in their patients, and 50.81% of them indicated that they often provide health advice on increasing physical activity. More than half of the primary care physicians (54.37%) declared that they assess patients' BMI when there are clinical indications, and 50.16% of respondents stated that they often recommend weight control to their patients, with only 0.65% of respondents indicating that they never do so. Age, gender, and BMI of the primary care physician had an impact on the frequency of assessing patients' diets, physical activity, and weight control, as well as on the frequency of advice provided by them ( $p < 0.05$ ). The majority of primary care physicians declared that they often provide general health advice to patients with non-communicable chronic diseases (43.04%), while 27.51% of respondents stated that they always provide such advice. About one-quarter of primary care physicians indicated that they provide detailed advice on proper nutrition, increasing physical activity, and weight control to patients with NCDs at every visit. In the group of patients surveyed, the majority (67.25%) stated that their primary care physician never assessed their diet/nutrition or physical activity level (70.77%). Over half of the respondents (57.28%) reported that their primary care physician never assessed their BMI. Close to 55% of patients stated that they never received recommendations from their primary care physician regarding dietary changes, increased physical activity, or weight control. General advice in this regard was received more frequently by older individuals (over 65 years old) and those with a basic education. Detailed advice on diet and weight control was received more frequently by patients with a basic education and those over 65 years old, while men, older individuals, and those with a basic education were more likely to receive detailed advice on increasing physical activity. With an increase in patients' BMI values, there was also an increase in the frequency of both general and detailed health advice provided by primary care physicians. There was also a statistically significant relationship that if a primary care physician discussed diet or/and physical activity with a patient, they also assessed these elements. There were statistically significant differences between primary care physicians and their patients in terms of the frequency of providing health advice on diet, physical activity, and weight control. Primary care physicians declared that they assess patients' diets and physical activity and provide advice on nutrition and physical activity more frequently than patients confirmed such assessments and provision of advice. Both primary care physicians and their patients agreed that health advice was more frequently provided to individuals suffering from non-communicable chronic diseases than to patients with risk factors for these diseases.

**Conclusions.** Nearly all primary care physicians included in the study declared that they assess their patients' dietary habits, physical activity, and BMI, and provide counseling in these areas. Women, physicians with a BMI indicating obesity, and physicians over 60 years old significantly more often assessed the diet, physical activity, and BMI of their patients. Advice on nutrition and physical

activity was significantly more frequently provided by women, older individuals (over 60 years old), and obese physicians. Recommendations for weight control were issued significantly more frequently by providers who were over 60 years old and by physicians whose BMI indicated obesity. All health promotion activities conducted by primary care physicians in the Podkarpackie Voivodeship were significantly more often carried out in the group of patients suffering from non-communicable chronic diseases than in patients burdened with risk factors for these diseases. Secondary prevention activities were shown to be more prevalent than primary prevention activities. Primary care physicians most frequently identified the belief that patients were not interested in such advice, difficulties in changing patients' daily habits, and lack of time to conduct health promotion activities as barriers to providing health counseling on diet, physical activity, and weight control. The most frequently suggested improvements by primary care physicians that could enhance the implementation of health promotion activities were more effective mechanisms for directing patients to specific medical advice, simple patient monitoring procedures, and more training on diet, physical activity, and weight control assessment and education for healthcare workers. The majority of patients surveyed stated that their primary care physician never assessed their diet/nutrition, physical activity level, or BMI. Diet and physical activity assessments were significantly more often performed on men, older individuals (over 65 years old), and patients with a basic education, while no significant differences were found in terms of BMI assessment in relation to gender, age, place of residence, or education. Over half of the patients never received recommendations from their primary care physician regarding dietary changes, increased physical activity, or weight control. General advice in this regard was more frequently received by older individuals (over 65 years old) and those with a basic education. Detailed advice on diet and weight control was received more frequently by patients with a basic education and those over 65 years old, while men, older individuals, and those with a basic education were more likely to receive detailed advice on increasing physical activity. With an increase in patients' BMI values, there was also an increase in the frequency of both general and detailed health advice provided by primary care physicians. There was also a statistically significant relationship that if a primary care physician discussed diet or/and physical activity with a patient, they also assessed these elements. Statistically significant differences were found between primary care physicians and their patients regarding the frequency of providing health advice on diet, physical activity, and weight control. Primary care physicians declared that they assess patients' diets and physical activity and provide advice on nutrition and physical activity more frequently than patients confirmed such assessments and provision of advice. Both primary care physicians and their patients agreed that health advice was more frequently provided to individuals suffering from non-communicable chronic diseases than to patients with risk factors for these diseases.

**Keywords:** primary care physician, patient, health-promoting activities, diet, physical activity, BMI.