

**SELECTED POSTERS IN STAFF FOR PREVENTION  
AT THE 2024' CONGRESS OF THE POLISH PUBLIC HEALTH  
SOCIETY**

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### ABSTRACT

This healthcare and public health workers dedicated poster session, presented at the VII International Congress of the Polish Public Health Society, showcased six research projects focused on understanding the need and wellbeing of staff in the healthcare system and public health. Topics included the evaluation of quality management practices within the State Emergency Medical Services (PRM) system in Poland, using evaluation studies as a diagnostic tool. The session also explored a health promotion programme implemented at Wrocław Medical University, highlighting the health risks and needs of the university community. Nutritional strategies for reducing and preventing obesity in shift workers were presented, emphasising the biopsychosocial impact of shift work.

Furthermore, the session addressed alcohol consumption patterns among students at Wrocław Medical University, revealing insights into their drinking behaviour. The evolving role of personal trainers in Poland was examined, focusing on the need to integrate public health knowledge and first aid competencies into their training. Lastly, the session explored modern directions for improving personnel training for the public health system, emphasising the importance of stakeholder input and continuous quality improvement. The presented research underscores the significance of targeted interventions, evidence-based practices, and ongoing education in addressing current public health challenges.

**Keywords:** public health, evaluation studies, quality management, emergency medical services, health promotion, shift workers, nutritional strategies, obesity prevention, alcohol consumption, students, personal trainers, public health competencies

### INTRODUCTION

The following posters were presented within the staff for prevention section at the VII International Congress of the Polish Public Health Society, themed "Prevention - A Great Investment in Public Health," held on November 27-28, 2024, at the MSWiA National Medical Institute, Warsaw, (\*) edited by. At the conference we discussed issues as professions important from the point of view of public health and new tasks of occupational medicine in prevention, and the role of research institutes in capacity building for public health staff. Congress addresses the crucial role of healthcare professionals and support staff in preventative healthcare. A key discussion point was the need for formal training and certification pathways for medical data coders. This formalisation is considered essential for improving the quality of data collection and enhancing epidemiological surveillance. The need to expand the skills of personal trainers to include public health knowledge was explored (as typical at such events, knowledge and learning are buzzwords). As not only ex cathedra expert opinion was taken into account, improving staff training in public health was discussed, based on surveys and interviews of students, employers, and other stakeholders, identifying strategic directions for enhancing the educational process in this vital field.

The application of evaluation studies in assessing quality management within Poland's State Emergency Medical Services (PRM) system was performed, with a methodology supported by the European Commission's guide-

lines on evaluating EU activities (European Commission, 2019). We will examine a health promotion initiative at Wrocław Medical University, reflecting the growing emphasis on health promotion in academic settings, as highlighted by the Ottawa Charter for Health Promotion (WHO, 1986). The session covered the development of nutritional strategies for shift workers, a population particularly vulnerable to metabolic health issues, a concern underscored by recent studies on shift work and health outcomes (Torquati et al., 2019). We further investigate alcohol consumption patterns among university students, a prevalent issue addressed in numerous studies (Wechsler et al., 2002). The expanding role of personal trainers in public health promotion were discussed, aligning with the increasing recognition of physical activity as a crucial determinant of health (Warburton & Bredin, 2017). Finally, we explore contemporary approaches to training public health professionals, a topic emphasized by the Association of Schools and Programs of Public Health (ASPPH, 2021).

#### **CHAPTER 1: POSSIBILITIES OF USING EVALUATION STUDIES IN THE DIAGNOSIS OF QUALITY MANAGEMENT PRACTICES IN THE STATE EMERGENCY MEDICAL SERVICES (PRM) SYSTEM**

The poster was presented by Tomasz Dec, who prepared it with co-author Magdalena Syrkiewicz-Światała.

This poster presents the topic of evaluation studies, which may be used in order to diagnose the quality management practice in the Polish system of State Emergency Medical Services (SEMS, or in Polish language: PRM). Evaluation studies have proved to be an effective tool for assessment of the results of public policies, which also covers those performed within the healthcare sector. The method of research applied in this article is based on the analysis of secondary data sources (scientific publications). The data for this article was derived from the well-known article databases (EBSCO, PubMed, Google Scholar). The obtained results of the study of available literature also present evaluation studies as a plausible method to study quality management practice in the SEMS/PRM system in Poland. Evaluation studies are based on specific principles which regulate the conduct of study, however, its key strengths are flexibility, scalability and internal modifiability, so that various problems of quality management can be evaluated according to the current research needs.

Furthermore, the use of evaluation studies in various organisational units within the SEMS/PRM system could enhance competence and skills in PRM teams. This article suggests that evaluation studies could deliver positive results for the SEMS/PRM system in Poland in two ways. First is that it could offer precise and accurate diagnosis for quality management within the system. The second assumption is that evaluation studies could be based on a designed evaluation model and provide a comprehensive insight into quality management practice.

## **CHAPTER 2: UNIVERSITY COMMUNITY IN HEALTH PROMOTION PROGRAMME USING THE EXAMPLE OF THE PROJECT “BUILD HEALTH WITH UMW”**

The poster was presented by Aleksandra Sołtysiak, who prepared it with co-authors: Miłosz Lipieta, Dorota Kiedik, Tomasz Zatoński, and Katarzyna Zatońska.

Supporting healthy behaviour within university communities is essential for enhancing the quality of life and productivity of both students and staff. The “Build Health with UMW” project, carried out at Wrocław Medical University during the 2022/2023 academic year, aimed to analyse health-related behaviour and implement actions to promote a healthier lifestyle among participants. The programme featured educational seminars, physical activity sessions, and social media campaigns, along with anthropometric and laboratory assessments for individuals at risk of metabolic disorders. In addition, a survey was carried out among employees to assess their needs related to health promotion and support for adopting a healthier lifestyle. The findings revealed notable challenges, including a high incidence of overweight and obesity, along with associated risks like insulin resistance and lipid imbalances. Participants showed a strong interest in health initiatives, with 90% of employees surveyed expressing the view that such programmes should be supported by employers. According to Wrocław Medical University staff, the educational sessions and physical activities have a favourable influence on their attitudes and health behaviour. This article presents the results of the pilot programme, highlights the identified health risks, and examines employee needs and expectations concerning health promotion in the workplace. The conclusions emphasise the need for comprehensive and long-term health initiatives that are specifically designed to meet the distinct requirements of academic communities.

## **CHAPTER 3: SHIFT2HEALTH PROJECT: DEVELOPMENT AND EVALUATION OF NUTRITIONAL STRATEGIES TO REDUCE AND PREVENT OBESITY IN SHIFT WORKERS.**

The poster was presented by Magdalena Wrzesińska, who prepared it with co-authors: Magdalena Wiczorkowska, Jarosław Rakoczy, and Katarzyna Binder-Olibrowska.

Shift workers are at risk of obesity and metabolic health problems, but there is still insufficient knowledge of the determinants and a lack of evidence-based interventions in this area. The aim of this study is to map the biopsychosocial functioning of shift workers in the healthcare and industrial sectors. This international project is funded by the European Union and carried out from 2023 to 2028. Online questionnaire is used to explore the health issues of workers in different sectors.

Individual interviews with managers and focus groups with shift workers aim to understand their opinions and expectations regarding health and well-

being. At this stage, it appears that shift workers suffer from sleep disorders, poor eating habits, lack of physical activity and increased stress levels.

Employers' responses to the health of shift workers appear to be inadequate, as perceived by both workers and their managers, due to a number of individual, organisational and systemic barriers. These factors can be taken into account when developing interventions. Shift work can significantly affect biopsychosocial functioning and increase health risk. The Shift2Health project can provide important evidence for public health, workers and employers to reduce the risk of obesity in the affected population.

#### **CHAPTER 4: ALCOHOL CONSUMPTION AMONG STUDENTS OF THE WROCLAW MEDICAL UNIVERSITY**

The poster was presented by Barbara Grabowska, who prepared it with co-authors: Maja Łazarska and Luba Ślósarz.

Alcohol is one of the most popular stimulants available on the market. Poland has a huge problem with the amount of alcohol consumed. In addition, academic life may be a substrate reinforcing the habit of alcohol consumption. The purpose of the study is to investigate alcohol consumption among students of the Wrocław Medical University. The study involved 322 students of the Wrocław Medical University. The study used: a self-administered questionnaire with a metric and the standardised AUDIT Test. Most students, as many as 91%, currently consume alcohol. Most of the students surveyed admitted that they started drinking alcohol between the ages of 15 and 17. Wine and beer are the most frequently consumed alcohols by students of the Medical University of Wrocław. Most students reach for alcohol at meetings/events with friends. As many as 87% of the respondents admitted that alcohol is consumed in the family home. Most students declared that they do not intend to ever give up drinking alcohol. An AUDIT score suggesting low-risk drinking was obtained by 67% of the students surveyed. Alcohol consumption among students at the Wrocław Medical University is at low risk. Women have a lower level of alcohol problem compared to men. Place of origin does not differentiate the level of alcohol problem among the surveyed students. Age of onset of alcohol consumption differentiates the level of alcohol problem.

#### **CHAPTER 5: NEW COMPETENCIES OF PERSONAL TRAINERS IN POLAND – INTEGRATING KNOWLEDGE OF PUBLIC HEALTH AND PHYSICAL ACTIVITY.**

The poster was presented by Nicholas Karolak, who is the sole author.

Modern health challenges, such as the increasing prevalence of obesity, diabetes, and cardiovascular diseases, highlight the role of physical activity in

preventing lifestyle-related illnesses. Personal trainers can play a key role in promoting a healthy lifestyle, but their competencies need to be expanded to meet the demands of public health. The aim of this study is to examine their educational needs and identify opportunities for professional development. Training proposals will be developed in the areas of public health, first aid, and cooperation with the healthcare system to effectively support prevention efforts and reduce the burden on the healthcare system. The annual increase in lifestyle diseases, such as obesity (>65% of Poland's population) and diabetes (>2 million cases, >5.5% of the population), poses a significant challenge. A sedentary lifestyle, excessive calorie intake, and lack of physical activity lead to complications, fatalities, and a decline in quality of life. Obesity is often associated with type 2 diabetes and is one of the leading causes of death worldwide. Physical activity helps control weight, improves bodily functions, regulates blood glucose levels, and supports mental health. Personal trainers, through their expertise, can effectively contribute to preventing these diseases. Personal trainers play a key role in promoting a healthy lifestyle by educating clients about the importance of physical activity, a balanced diet, and psychophysical well-being. Through direct contact with individuals and awareness of their health needs, they can effectively support the prevention of lifestyle diseases. Their knowledge allows them to tailor training programmes to individual needs, increasing the effectiveness of preventive actions. By collaborating with the healthcare system, including doctors, dietitians, and psychologists, they become an essential part of health support. Their role extends beyond recreational activities – they are becoming significant contributors to building a healthier and more active life. The educational programme for personal trainers in Poland lacks standardisation and does not sufficiently include public health and first aid training. There is a growing need for collaboration with the medical sector. Expanding competencies in health psychology, client motivation, and interdisciplinary cooperation will enhance disease prevention and improve social outcomes. To increase the effectiveness of personal trainers in promoting public health, training programmes should be standardised, combining theory with practice, including public health and first aid. Additionally, collaboration with healthcare professionals such as doctors, dietitians, and psychologists are crucial. Advanced education for trainers contributes to better public health and reduces the burden on the healthcare system. Implementing a similar model in Poland could bring significant benefits. A literature analysis shows that personal trainers in Poland recognise the need to develop competencies in promoting public health. However, there is a lack of standardised programmes that integrate theory with practice. Examples from other countries indicate that expanding knowledge in health psychology and cooperation with medical professionals enhances the effectiveness of trainers' activities. In Poland, there is potential to develop comprehensive training programmes. Findings from the literature analysis highlight the necessity of expanding personal trainers' competencies in public health, first aid, and collaboration with the healthcare system. Personal trainers have significant potential in promoting a healthy lifestyle and preventing lifestyle diseases such as

obesity, diabetes, and cardiovascular diseases. To fully utilise this potential, integrated and standardised training programmes combining theory with practice are needed. Examples from other countries demonstrate that trainers with advanced training in health support can contribute effectively to the healthcare system. Similar initiatives in Poland could significantly strengthen their role. A key aspect of their development is also establishing cooperation with medical professionals such as doctors, dietitians, and psychologists, which would allow for more comprehensive client support. Introducing training programmes in dietetics, health psychology, and first aid could significantly enhance their qualifications and improve preventive health efforts in Poland.

### **CHAPTER 6: MODERN DIRECTIONS OF IMPROVEMENT OF PERSONNEL TRAINING FOR THE PUBLIC HEALTH SYSTEM**

The poster was presented by Tetiana Gruzieva, who prepared it with co-authors: Haliienko, Borys Palamar, Nataliia Hrechyshkina, and Hanna Inshakova.

Given the relevance of training a new generation of public health professionals, equipped with modern knowledge and skills to implement the main operational functions of public health and form the necessary competencies, special attention should be paid to the content of educational programmes, their constant updating and consideration of stakeholders' interests. The study employed bibliosemantic, informational-analytical, medical-statistical, sociological methods, and content analysis methods. The research programme included the analysis of scientific literature, WHO and ASPHER documents, sociological surveys of stakeholders, students of the Master's programme in Public Health, and employers on the areas of improvement of the educational process. It was found that  $98 \pm 2,1$  out of 100 students surveyed are satisfied with their curriculum, in particular its content, with the possibility of forming an individual learning trajectory, passing on practice, participating in research and improving the programme. Employers highly appreciated the practical orientation of training ( $95 \pm 4.4$  per 100 respondents), the quality of personnel, teaching-methodical, and logistic support, with the involvement of practitioners and representatives of employers. The majority of respondents consider the strategic directions of improving learning to be constant quality improvement, student-centered learning, practical orientation, internationalisation of education, participation in scientific research. Studying the opinions of students, employers on the content and implementation of the Master of Public Health educational programme allows for a comprehensive assessment of the learning process, identifying strengths, advantages, existing and potential problems. The results of the stakeholder surveys are the basis for a critical review of the educational programme and its improvement in accordance with current needs.

## CONCLUSIONS

We see how evidence-based practices and targeted interventions are crucial for addressing specific population health needs. Poland is the country with one of the lowest rates of nurses per population with most of them being close to retirement age. Our healthcare system highly depends on staff trained in Eastern Europe. On the other hand many highly qualified Polish medical doctors are leaving for an environment with better conditions (i.e. salary). One of the lessons learned during the Boris 2024 floods in the Oder River basin is the issue of safety for the services and volunteers who help others (Maciejewski et al., 2025). The awareness that if we don't take care of our services is instilled in the next generation of dispatch services. Thus, understanding the needs and conditions of healthcare workers is extremely important.

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