



Fund “Nauka” Project № 24025 Resume – Autumn Competition-based Session 2024:

“Application of geographic information systems for health inequalities assessment in Bulgaria”

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Health inequalities are a leading priority of global health policy. Measures to reduce them and adequate policies aimed at achieving this goal should be based on data and scientific evidence on the nature, magnitude and trends of health inequalities and the unequal access to health services in populations, as well as evidence on the factors that determine them at the national (contextual) level.

The fundamental goal of this project is to provide adequate, reliable and publicly accessible scientific information on regional health inequalities in Bulgaria and the factors that determine them, as an indispensable prerequisite for stimulating and developing health policies with the potential to achieve “proportional equity” in meeting health needs. Decomposed, this goal includes:

- (1) Revealing and analyzing the magnitude and trends of regional health inequalities in Bulgaria;
- (2) Exploring the specificities of regional constellations of health risk factors and their attributive role in health inequalities;
- (3) Examining patients’ subjective assessments of their health status and experiences with health services (Patient Reported Outcome Measures – PROMs & Patient Reported Experience Measures – PREMs) and analysis of the impact of regional community characteristics and healthcare system on patient-reported health status and experience with health services;
- (4) Exploring the potential of geographic information systems for public health and health systems analysis.

Six complex tasks have been formulated in order to achieve the project goal. The activities planned under each task are organized in “work packages” related to the specific topics of the various research studies in the project (5 specific work packages), and two functional ones related to the management of the project and the dissemination of its results.

За постигане на целта са формулирани шест комплексни задачи:

- (1) Разработване на изследователски инструментариум за събиране на информация и избор на система от показатели за оценка и визуализация на здравните неравенства и техните детерминанти и на концепция за уеб-платформа за визуализация на данните и изследване на явленията.
- (2) Събиране и обобщаване на първична и вторична информация за здравните неравенства и техните детерминанти на национално, регионално, областно и общинско равнище в България; изграждане на база данни, като основа за разкриване и обяснение на здравните неравенства и обуславящите ги фактори, предоставяща възможност за изучаване на тенденциите в наблюдаваните явления, чрез периодично ѝ допълване с данни за следващи времеви периоди.
- (3) Разработване и въвеждане в действие на обществено достъпна специализирана уеб-базирана платформа за визуализация на регионалните здравни неравенства и регионалните характеристики, които ги детерминират или създават рискове за общественото здраве.
- (4) Анализи и синтез на данните за здравните неравенства и техните детерминанти с фокус върху факторите, които оказват влияние върху регионалните различия.
- (5) Формулиране на изводи и препоръки за развитие на специфични здравни политики и конкретни интервенции, насочени към намаляване на неравенствата и неравнопоставеността в различните региони.
- (6) Трансфер на знанията и застъпничество: разпространение на резултатите сред научната общност, политици и други заинтересовани страни и сред широката общественост; фокусиране на общественото внимание върху значимите неравенства в здравето в България.

Expected project results for public health and health policy in Bulgaria:

- (1) Bulgaria's first GIS-based web platform for public health monitoring and health analysis – established;
- (2) Existing, regional level, health data collected and presented; new data – generated; database on health inequalities and health inequities at national, regional and district levels continuously maintained and updated;
- (3) Wide range of regional imbalances concerning population health visualized;
- (4) Increased awareness of issues related to health inequalities in our country;
- (5) Scientific prerequisites created for stimulating public activism and scrutiny to address imbalances in the health system.

Outcomes of the project research:

- (1) A GIS-based web platform with public health data will provide the potential for meaningful analyses of regional health inequalities;

- (2) Several relevant scientific studies conducted in the short and medium term, which will enable and increase the project participants' publication activity (10 publications are planned), not only in Bulgarian but also in international scientific journals with impact factors indexed in international databases;
- (3) In the long term, stimulation of the health policy planning and the number of research studies conducted through the visualization of the available and missing information on the health and resource endowment of the system in the regions;
- (4) Short and long-term increase in the competitiveness of MU-Varna in the field of geospatial analysis related to public health;
- (5) Building up a high-quality research work expertise in the Faculty of Public Health and the MU-Varna.
- (6) Establishment of a broad interdisciplinary research network.

Career development results:

- (1) Support in the completion and defence of two PhD theses (they are expected to be defended within the project's timeframe);
- (2) Career development stimulation of the young scientists, PhD students, and postdoctoral researchers included in the project team by scientific contributions and publications.