



TRANSFORMING HEALTHCARE: THE ROLE OF NGOS IN PROMOTING AND BUILDING A P4 MEDICINE HEALTH SYSTEM

TRANSFORMACIJA ZDRAVSTVA: ULOGA NEVLADINIH ORGANIZACIJA U PROMOCIJI I IZGRADNJI ZDRAVSTVENOG SISTEMA P4 MEDICINE

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ABSTRACT

P4 medicine, with its focus on predictive, personalized, preventive, and participatory healthcare, has potential to transform traditional model of medicine. This article examines the principles and potential impact of P4 medicine, emphasizing role of non-governmental organizations (NGOs) in promoting and building a P4 medicine health system. The analysis explores two Erasmus+ projects, Train4inclusive and SNATCH, which involve NGOs and highlight their significant contributions to the implementation of P4 medicine. NGOs can contribute to P4 medicine through advocacy, awareness, research, innovation, policy development, collaboration and partnerships. By raising awareness about P4 medicine, advocating for its principles, and collaborating with stakeholders, NGOs can drive positive change in healthcare systems. The Train4inclusive project focuses on educating trainers working with people with disabilities to monitor their progress in organized sports activities. This project contributes to personalized monitoring, data collection, analysis, collaboration, and knowledge exchange within the context of P4 medicine. The SNATCH project educates swimming trainers and teachers about healthy lifestyle factors, aligning with the principles of P4 medicine, including a holistic approach, prevention, wellness, personalized education, behavioral changes, and collaboration. The implementation of P4 medicine requires active participation of all stakeholders, including NGOs, small businesses, healthcare providers, researchers, technology developers, and general population. Timely education and preparation are crucial for a successful transition to P4 medicine.

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Furthermore, while not specifically analyzed in this article, the role of Artificial Intelligence (AI) in P4 medicine is expected to be significant, with AI-powered personal health agents playing a fundamental role in delivering personalized and proactive healthcare.

Key words: P4 medicine, non-governmental organization, support, education.

SAŽETAK

P4 medicina, sa svojim fokusom na prediktivnu, personaliziranu, preventivnu i participativnu zdravstvenu njegu, ima potencijal da transformiše tradicionalni model medicine. Ovaj članak opisuje principe i potencijalni utjecaj P4 medicine, naglašavajući ulogu nevladinih organizacija (NGO) u promoviranju i izgradnji P4 medicinskog zdravstvenog sustava. Analizirana su dva Erasmus+ projekta, Train4inclusive i SNATCH, koji uključuju NGO-ove i ističu njihov značajan doprinos u implementaciji P4 medicine. NGO-ovi mogu doprinijeti P4 medicini kroz zagovaranje i podizanje svijesti, istraživanje i inovacije, razvoj politika, te suradnju i partnerstva. Podizanjem svijesti o P4 medicini, zagovaranjem njenih principa i suradnjom sa zainteresiranim stranama, NGO-ovi mogu pokrenuti pozitivne promjene u zdravstvenim sustavima. Projekt Train4inclusive fokusira se na obrazovanje trenera koji rade s osobama s invaliditetom kako bi pratili njihov napredak u organiziranim sportskim aktivnostima. Ovaj projekt doprinosi personaliziranom praćenju, prikupljanju i analizi podataka, suradnji i razmjeni znanja u kontekstu P4 medicine. Projekt SNATCH educira trenera plivanja i učitelje o faktorima zdravog načina života, usklađujući se s principima P4 medicine, uključujući holistički pristup, prevenciju i blagostanje, personalizirano obrazovanje, promjene ponašanja i suradnju. Implementacija P4 medicine zahtijeva aktivno sudjelovanje svih dionika, uključujući NGO-ove, male poslovne subjekte, zdravstvene djelatnike, istraživače, razvojnike tehnologije i opću populaciju. Pravovremeno obrazovanje i priprema su ključni za uspješan prijelaz na P4 medicinu. Nadalje, iako nije posebno analizirana u ovom članku, očekuje se značajna uloga umjetne inteligencije (AI) u P4 medicini, pri čemu će AI-pokretani osobni zdravstveni agenti imati temeljnu ulogu u pružanju personalizirane i proaktivne zdravstvene skrbi.

Ključne riječi: empatija, osobe sa invaliditetom, podrška, edukacija.

THE ROLE OF NONGOVERNEMENTAL ORGANIZATION IN PROMOTION AND BUILDING P4 MEDICINE HEALTH SYSTEM

Renowned American economist Jeremy Rifkin, in his bestselling book "The Age of Access)" (Rifkin, 2001) emphasizes the crucial role of non-governmental organizations (NGOs) in building trust within society. Trust serves as a foundation for implementing significant social changes. In the context of P4 medicine, we believe that civil society organizations can and will play a significant role in supporting its implementation across various areas:

Advocacy and Awareness: NGOs can raise awareness about P4 medicine among the public, healthcare professionals, and policymakers. By advocating for the adoption of P4 medicine principles and practices, they can emphasize the potential benefits it holds for individuals and society at large.

Research and Innovation: NGOs can contribute to research efforts in P4 medicine by collaborating with academic institutions, healthcare providers, and industry partners. By supporting studies exploring the effectiveness of personalized treatments, the impact of lifestyle interventions, and the development of innovative technologies, NGOs can facilitate advancements in individualized healthcare.

Policy Development: NGOs can actively participate in policy discussions and contribute to the development of regulations and guidelines related to P4 medicine. Drawing on their expertise, insights, and recommendations, NGOs can ensure that the implementation of P4 medicine aligns with ethical, equitable, and patient-centred principles.

Collaboration and Partnerships: NGOs can foster collaborations and partnerships among various stakeholders in the healthcare ecosystem, including healthcare providers, researchers, technology developers, and patient organizations. Through these collaborations, NGOs can facilitate the exchange of knowledge, resources, and best practices in P4 medicine, enabling a holistic approach to healthcare.

By actively engaging in these areas, NGOs can play a vital role in supporting the implementation of P4 medicine, fostering trust, and driving positive change in healthcare systems. Their contributions can pave the way for a more personalized, preventive, and participatory approach to healthcare, benefiting individuals and society as a whole.

Participating in Erasmus+ projects Train4inclusive and Swimming and Nutrition As Tools for Containing Health – SNATCH we found out that both project involving several nongovernmental organizations supporting sport activities of people with disabilities can have significant impact on implementation of P4 medicine based healthcare system. In Train4inclusive project we have prepared educational programme and materials which will teach trainers working with people with disabilities how to monitor the progress of disabled persons who are participating in the organized sport. There are many nongovernmental organization active in this field however most of them do not monitor the impact of organized sport on physical, mental, social health and inclusion of persons with disabilities organizations are supporting. Trainers do not collect data describing the impact of sport on the quality of life of people with disabilities because they do not have necessary skills and knowledge to do that.

The Train4inclusive project, with its focus on preparing educational documents and education for trainers working with people with disabilities in monitoring their progress in organized sports activities, can contribute to the development of P4 medicine in several ways:

Personalized Monitoring: The project's educational documents can help trainers personalize the monitoring process for individuals with disabilities participating in sports activities. By understanding each person's unique abilities, needs, and goals, trainers can tailor monitoring techniques and measurements accordingly, aligning with the personalized approach of P4 medicine.

Data Collection and Analysis: The project can emphasize the collection and analysis of relevant data during the monitoring process. Trainers can gather information about individuals' physical performance, progress, and well-being, and use this data to assess the effectiveness of interventions, identify trends, and make informed decisions about personalized care plans.

Collaboration and Knowledge Exchange: The Train4inclusive project can foster collaboration and knowledge exchange between trainers, experts in sports for people with disabilities, and healthcare professionals. By bringing together different stakeholders, the project can facilitate the sharing of expertise, best practices, and research findings, contributing to a comprehensive understanding of personalized approaches to sports activities within the context of P4 medicine.

The SNATCH project, which focuses on educating swimming trainers and teachers about healthy lifestyle factors such as sleep, food, and physical activity, can contribute to the principles of P4 medicine in the following ways:

Holistic Approach: The project promotes a holistic approach to health by educating trainers and teachers about various aspects of a healthy lifestyle. P4 medicine emphasizes the importance of considering all factors that influence an individual's health, including nutrition, physical activity, sleep, and other lifestyle choices. By providing knowledge and awareness in these areas, the project aligns with the holistic approach of P4 medicine.

Prevention and Wellness: The project emphasizes the importance of prevention and wellness by educating trainers and teachers about healthy lifestyle practices. P4 medicine aims to shift the focus from treating diseases to preventing them and promoting overall well-being. By educating professionals who work closely with individuals in sports and educational settings, the SNATCH project can help promote preventive measures and wellness-oriented approaches, in line with the goals of P4 medicine.

Personalized Education: The project can contribute to personalized education for trainers and teachers, taking into account the specific needs and preferences of individuals. P4 medicine recognizes the importance of tailoring healthcare and lifestyle recommendations to each person's unique characteristics. By providing personalized education on healthy lifestyle factors, the SNATCH project supports the individualization aspect of P4 medicine.

Behavioural Changes: The project can facilitate behavioural changes among trainers, teachers, and the individuals they work with. By raising awareness about the impact of lifestyle choices on health, the project can encourage trainers and teachers to adopt and promote healthy behaviours. This aligns with the behavioural component of P4 medicine, which emphasizes the role of lifestyle modifications in improving health outcomes.

Collaboration and Knowledge Exchange: The SNATCH project can facilitate collaboration and knowledge exchange among swimming trainers, teachers, and other healthcare professionals. By bringing together different stakeholders, the project promotes interdisciplinary collaboration and the sharing of expertise and best practices. This collaborative approach supports the integrative nature of P4 medicine, where different disciplines work together to provide personalized care.

The analysis of the Train4inclusive and SNATCH projects provides compelling evidence for the significant impact that NGOs can have on the implementation of P4 medicine. These initiatives highlight the valuable contributions that civil society organizations can make in building a new healthcare model that is being implemented in various fields of medicine. (Boffetta, 2022).

CONCLUSION

The concept of P4 medicine, which encompasses predictive, personalized, preventive, and participatory healthcare, has the potential to revolutionize the traditional model of medicine. By leveraging advanced technologies, big data analysis, and personalized interventions, P4 medicine aims to provide more precise and individualized healthcare. While the realization of a full-scale wellness industry and widespread implementation of P4 medicine is yet to be seen, there is a strong trend towards its adoption globally. Non-governmental organizations (NGOs) are expected to play a crucial role in promoting and building the P4 medicine health system. By raising awareness, supporting research, influencing policies, and fostering collaborations, NGOs can drive the implementation of P4 medicine and contribute to positive changes in healthcare systems.

The successful establishment of a P4 medicine-based healthcare system necessitates the active participation of all stakeholders involved in the healthcare ecosystem. This includes healthcare providers, researchers, technology developers, patient organizations, and the general population. Therefore, it is crucial to educate these stakeholders about the principles and benefits of P4 medicine. The transition from the traditional clinic-focused approach to a wellness-oriented model presents a significant opportunity for small businesses and NGOs. These organizations must be prepared to leverage this opportunity and actively participate in the implementation of P4 medicine. By doing so, they can contribute to the knowledge and skills required for the successful adoption of the P4 medicine model. Considering the imminent shift in the healthcare paradigm, there is limited time for preparation. Therefore, it is essential to accelerate the education and training efforts for stakeholders to ensure a smooth and efficient transition to P4 medicine. This timely preparation will facilitate the realization of the benefits associated with the implementation of P4 medicine, including personalized and preventive healthcare approaches, improved patient outcomes, and the overall enhancement of well-being. The engagement of all stakeholders, including small businesses, NGOs, healthcare providers, researchers, technology developers, and the general population, is vital for the building of a P4 medicine-based healthcare system. Education and preparation are necessary to enable stakeholders to understand the principles of P4 medicine and maximize the opportunities presented by the transition to a wellness-focused paradigm. With the limited time available, it is crucial to act promptly and collaboratively to ensure a successful and timely implementation of P4 medicine. Although we did not specifically analyse the role of Artificial Intelligence (AI) in the development of P4 medicine, we anticipate that AI will play a crucial role in the near future. We envision a scenario where every individual will have their own P4 health agent, accessible through a smartphone application by simply tapping an icon. With advancements in AI technologies, personalized healthcare management can become more seamless and efficient. These P4 health agents would be equipped with advanced algorithms and data analysis capabilities, allowing them to integrate various sources of information such as genetic data, lifestyle choices, environmental factors, and biomarkers. By leveraging AI, these agents can provide personalized predictions, preventive interventions, and real-time monitoring, enabling individuals to take proactive control of their health. The potential of AI in the context of P4 medicine is vast.

AI algorithms can analyze vast amounts of data and identify patterns, helping to predict an individual's risk of developing certain diseases or conditions. They can also offer tailored recommendations for lifestyle modifications and preventive measures based on an individual's unique characteristics. Furthermore, AI-powered virtual assistants can provide personalized health advice, track progress, and offer continuous support in managing one's well-being.

In summary, while our analysis did not delve into the specific role of AI in P4 medicine, we strongly believe that AI will be a fundamental component of the future P4 healthcare landscape. The integration of AI technologies, such as personalized health agents accessible through smartphones, has the potential to revolutionize healthcare delivery by providing individuals with personalized, predictive, and participatory tools for managing their health and well-being.

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