



4P-CAN

Evidence on cancer primary prevention from living-lab Arges, Romania, in the context of the 4P-CAN project and EU Mission on Cancer implementation in Eastern Europe

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Executive Summary

In Eastern Europe, cancer remains a significant health threat, with high mortality rates stemming from preventable causes. Challenges persist in primary prevention, marked by low HPV vaccination rates and prevalent risk factors like smoking and obesity. Secondary prevention efforts also lag, leading to late-stage cancer detection and increased mortality rates. Despite European and national initiatives implemented, the EU Mission on Cancer struggles for traction, particularly in countries with limited research and innovation investment. To address these challenges, a paradigm shift towards innovative, holistic strategies is essential, with emphasis on collaborative approaches. In this context, the cancer primary prevention focused living lab in Arges county, Romania, in the frame of 4P-CAN implementation research project under EU Mission on Cancer, is relevant and crucial beyond the project itself. This living lab has the potential to early indicate how to innovate and build best practices on EU Mission on Cancer implementation in Eastern Europe, and beyond. Establishing regional cancer hubs and employing advanced methodologies can enhance prevention efforts in an equitable and inclusive manner, reduce inequalities, and foster resilient societies. Prioritising the EU Mission on Cancer in funding and aligning with existing initiatives are vital steps towards combating this pressing health crisis and promoting a healthier Europe.

Policy Brief

In Eastern Europe, cancer continues to be strikingly fatal, with Eastern countries consistently ranking poorly in terms of preventable and treatable causes of mortality, exposing the highest death rates from avoidable causes in the EU. Primary prevention efforts, especially in Eastern Europe, face significant challenges, characterised by low Human Papillomavirus (HPV) vaccination coverage and high rates of risk factors such as smoking, obesity, and alcohol consumption. These behaviours contribute to heightened cancer incidence rates in these populations. Shortcomings also persist in secondary prevention, where the implementation of effective and high-quality screening and early diagnostic programs lags behind. Consequently, cancer detection often occurs at later, less treatable stages, resulting in poorer health outcomes and increased mortality rates.

Despite the efforts in the last years at European level and initial enthusiasm at national level, the EU Mission on Cancer struggles to gain traction among its target audiences, and the concept of Mission remains fairly unfamiliar to society. This challenge is particularly enhanced in countries with limited investment and performance in biomedical research, often also characterised by modest innovation. To combat this issue and bolster societal awareness while ensuring an equitable access not only to treatment, but also to preventive actions and education, a paradigm shift is deemed not only in Eastern Europe, but in Europe as a whole. Today, societal behaviour and people's awareness and actions are heavily influenced by trends and misinformation, which leads to an urgent call for novel solutions. For this, it is imperative to develop and implement innovative holistic and systemic strategies that transcend traditional methods, and align with today's rapidly evolving landscape.

In this context, the implementation of the cancer primary prevention focused living lab in Arges county, Romania, in the frame of 4P-CAN implementation research project under EU Mission on Cancer, is relevant and crucial beyond the project itself. This living lab has the potential to early indicate how to innovate and build best practices on EU Mission on Cancer implementation in Eastern Europe, and beyond.

It is evident that addressing the aforementioned challenges from a singular and linear perspective is no longer sufficient, and new collaborative approaches involving diverse societal actors are essential. These networks and partnerships are crucial for mobilising the entire system, engaging both traditional and

non-traditional stakeholders. However, these collaborations must remain adaptable to accommodate the changing dynamics of society, enabling effective and continuous engagement across various sectors and fields. A living lab is a powerful tool for implementation research but a great indicator for this dynamic mindset who should replace the static traditional approaches.

The establishment of regional quadruple or penta-helix models for collaboration, through the creation of funding mechanisms and thematic regional and local cancer hubs, result critical not only for advancing national agendas but also for effectively implementing the EU Mission on Cancer across Member States. These emerging complex systems models hold the potential of fostering ongoing and structured dialogue, and building more connected, strong, and resilient regions and overall societies. To actively monitor their efficiency, the subsequent development of innovative methods to map stakeholder engagement, measure interaction and influence, is essential. The orchestration of these cancer hubs can also help combat stigma and fatalism. These factors significantly affect society particularly in rural areas in Eastern Europe, influencing adherence to participation in research and prevention programs. These collaborative efforts, however, require dedicated spaces, such as living labs, for bringing stakeholders together, disseminate information, educate, and experiment using the living lab mindset, methodologies and validated frameworks. This entails integrating innovative methodologies from the social sciences, humanities, education, and communication fields to address challenges collectively to mitigate barriers and promote greater engagement in initiatives aimed at preventing cancer.

For instance, advanced techniques such as social and personal network analysis, including the mapping of stakeholder interactions and personalised communication models, which are being employed for the first time in the context of cancer prevention within the 4P-CAN framework, can facilitate the delivery of tailored messages to individuals. By leveraging these cutting-edge tools and methodologies, we can ensure that the right message reaches the right person, inform communication campaigns and facilitate targeted interventions at the network node level. This maximises the effectiveness of our efforts in preventing cancer. This approach holds promise for substantially diminishing inequalities in a manner that is both efficient and cost-effective at national, regional, and local levels, beginning at the grassroots level and progressing through experimentation. In this way is promoted the active engagement with underrepresented or marginalised communities in Eastern Europe to ensure their voices are heard and their needs are addressed in cancer prevention efforts. This

will guarantee that the cultural differences will be respected and integrated into the implementation of strategies, ensuring that interventions are culturally sensitive and appropriate.

Within this framework, the living lab model further emerges as addressing historically overlooked geographical regions through implementation research. In addition, it offers a vital platform for connecting stakeholders and ensuring citizen involvement in research through the assessment attitudes, perceptions, and experiences, thus fostering the sharing of insights and expectations. Through such activities, local authorities have also been proven to have significant impact, especially when incentivised. This comprehensive and systemic bottom-up model seeks to revolutionise current paradigms and complement top-down national approaches. Yet, for these endeavours to realise their full potential, it's imperative that the EU Mission on Cancer be recognised as a top priority for accessing funds and programs, especially those traditionally benefiting less developed member states, such as the Horizon Europe Widening Program. In addition, regional and national synergies with existing and emerging European initiatives and projects must be ensured. The alignment of objectives, expectations and policies is vital for a streamlined implementation of actions across and within Member States. Only by prioritising the EU Mission on Cancer in funding allocation and acknowledging the significance of a systemic approach, we can confront this urgent health challenge and improve European's health whilst creating strong and resilient systems.