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PREVENTIVE STRATEGIES IN HEALTH PROMOTION FOR ENSURING THE RIGHT TO HEALTH

The right to health, as defined by the World Health Organization (WHO), is the right of every individual to access the highest attainable standard of health, encompassing both access to healthcare and the broader social determinants of health such as health literacy, clean water, and healthy environments. Health promotion, as a 'process of enabling people to increase control over their health' (Ottawa charter, 1986), plays a vital role in realizing this right. It involves addressing both individual behaviors and social, economic, and environmental factors that influence health, through education, policies, and community-based interventions.

Health promotion strategies, such as WHO Healthy Cities initiatives, healthy nutrition, physical activity, oral health, tobacco and alcohol control, mental health promotion, the appropriate use of healthcare services, ecology and health, immunization, and preventive screenings – are integral to fulfilling the right to health. Special attention is given to gender-sensitive preventive strategies, particularly those focused on access to prenatal care, adolescent's and women's health, reproductive health, and healthy ageing.

This paper highlights the experiences of health promotion interventions (programmes and projects) in Novi Sad and the Autonomous Province of Vojvodina, developed by the Institute of Public Health of Vojvodina, focusing on key mentioned areas. These programs aim to improve health outcomes by engaging communities in healthier lifestyle choices and behaviors. Health promotion efforts in the City of Novi Sad and the Autonomous Province of Vojvodina (APV) offer valuable examples of how local interventions, tailored to the specific needs of the population, can reduce health risks and improve outcomes. By examining case studies and best practices,

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the paper illustrates the successes and challenges of these initiatives, stressing the importance of continuous evaluation of their impact.

Finally, the paper proposes policy recommendations for strengthening preventive strategies at local, national, and international levels, advocating for the development of comprehensive legal frameworks to ensure equitable access to preventive health services for all populations. These strategies demonstrate how health promotion contributes to health equity, empowering individuals and communities to make healthier choices and ultimately improving population health outcomes.

Keywords: *health promotion, health education, right to health, community health programs, preventive health services, health equity.*

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1. Health as a Human Right: Foundations for Health Promotion, Primary Health Care and Public Health

Following the Second World War, health – alongside education, employment, and other essential needs – increasingly came to be viewed as a universal human right. This perspective was formally expressed in 1946 with the adoption of the World Health Organization's (WHO) Constitution, which declared that "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being". The Universal Declaration of Human Rights reinforced this in 1948 by explicitly including the right to health. Despite these significant political affirmations, it was not until 1966 that the right to health gained legally binding force through Article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), obligating signatory states to implement this right.

In 1978, health was further recognized as a key element in promoting peace and solidarity among nations. The Alma-Ata Declaration emphasized health as a shared global objective and positioned primary health care as central to achieving it, firmly grounded in principles of equity, participation, and human rights. Notably, Professor Đorđe Jakovljević, from the Department of Social Medicine at the Faculty of Medicine, University of Novi Sad, participated in the Alma-Ata Conference as a WHO expert. His involvement in shaping the definition of primary health care reflected international acknowledgment of the dispensary-based model of primary care that had been developed in the Socialist Federal Republic of Yugoslavia. This participation symbolized recognition

of Yugoslavia's innovative approach to organizing accessible and community-oriented health services.

The right to health, as articulated in international frameworks such as the WHO Constitution and Article 12 of the International Covenant on Economic, Social and Cultural Rights, encompasses not only access to medical care but also the underlying determinants of health. This broad definition provides a foundation for addressing specific public health challenges, including gender-based health disparities, tobacco use, and the need for comprehensive health promotion.

In the context of women's health, the right to health demands equitable access to sexual and reproductive health services, protection from gender-based violence, and action on the social determinants that disproportionately affect women – such as poverty, limited education, and discrimination. Fulfilling this right requires gender-sensitive policies and health systems that address both biological and sociocultural factors impacting women's health outcomes.

Tobacco control is another critical area where the right to health is directly engaged. Tobacco use remains a leading cause of preventable disease and death, and the WHO Framework Convention on Tobacco Control (FCTC) explicitly recognizes states' obligations to protect present and future generations from its devastating consequences. Measures such as smoke-free laws, advertising bans, and taxation are not merely regulatory tools – they are essential instruments for upholding the right to health, particularly among vulnerable groups such as youth and low-income populations.

Health promotion plays a central role in realizing the right to health by empowering individuals and communities to increase control over their health and its determinants. It extends beyond individual behavior to encompass a wide range of social, environmental, and political interventions aimed at fostering well-being. The Ottawa Charter for Health Promotion (1986) defines health promotion as "the process of enabling people to increase control over, and to improve, their health." It identifies five key action areas: 1. Building healthy public policy; 2. Creating supportive environments; 3. Strengthening community action; 4. Developing personal skills; 5. Reorienting health services toward prevention and promotion.

The overarching goals of health promotion strategies are to reduce health inequities, prevent disease, and improve quality of life across the lifespan. These strategies are most effective when they are participatory, multisectoral, and tailored to the cultural and social contexts of specific populations. For example, promoting health among women must address gender norms and empower women to make informed choices, while tobacco control interventions must focus on both reducing exposure and addressing the industry's targeting of vulnerable groups.

Taken together, women's health, tobacco control, and health promotion illustrate how the right to health is not an abstract principle, but a dynamic and actionable framework that guides public health policy, legal obligations, and social justice efforts. Health promotion, in particular, is a powerful tool for translating rights into practice – by fostering environments in which people are not only protected from health risks, but also supported in achieving their highest attainable standard of health.

Health promotion is a central field within public health, dedicated to empowering individuals and communities to take greater control over the determinants of their health. It is fundamentally preventive, participatory, and policy-oriented, aligning directly with the broader aims of public health.

One of the earliest and most enduring definitions of public health was provided by Charles-Edward Amory Winslow in 1920, who described it as: "the science and art of preventing disease, prolonging life and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery to ensure everyone a standard of living adequate for the maintenance of health."

Within this definition, health promotion is clearly reflected in components such as health education, social and environmental reform, and preventive services. Today, health promotion continues to evolve as a dynamic approach to achieving equity in health and ensuring the realization of the right to health, particularly through policy advocacy, community mobilization, and the creation of supportive environments.

2. The Role of Health Promotion in Achieving the Right to Health

Health promotion plays a vital role in realizing the right to health, a core element of international human rights law. While prevention focuses on reducing the occurrence of specific diseases, health promotion adopts a broader, proactive approach – empowering individuals and communities to take control of their well-being (World Health Organization [WHO], 1986). Prevention includes measures such as immunizations, screenings, and risk-based interventions, whereas promotion emphasizes enabling healthy choices, creating supportive environments, and addressing underlying determinants like social, economic, and environmental factors (Nutbeam, 2000).

The distinction between prevention and health promotion is significant. Prevention is often disease-specific and reactive – it seeks to inhibit or reduce pathologies that

have already been identified. Health promotion, in contrast, is proactive and holistic: it encourages the development of well-being through educational campaigns, policy changes, and community empowerment (Green & Tones, 2010). For example, whereas preventive efforts might aim to increase vaccination coverage to stop outbreaks, health promotion might involve community-led campaigns to educate about the broader benefits of immunizations and facilitate access to services through improved transportation or culturally sensitive outreach.

2.1. Importance in Access to Quality Healthcare, Reducing Inequalities, and Disease Protection

Health promotion is essential for ensuring equitable access to quality healthcare. It empowers individuals to understand and navigate healthcare systems, seek timely care, and advocate for services that respond to their needs (Kickbusch, 2015). By addressing social determinants – such as poverty, education, safe housing, and clean environments – health promotion reduces health disparities across populations (Marmot & Wilkinson, 2005). This preventative groundwork lowers the burden on health services by reducing incidence of chronic conditions and communicable diseases, translating into overall improved population health and long-term cost savings (WHO, 2013).

Moreover, protecting populations from disease is not solely about medical interventions – it also involves creating environments where healthy choices are accessible, sustainable, and valued. For instance, promoting physical activity through urban planning (like walkable neighborhoods and green spaces) contributes to reducing obesity-related illnesses, thereby enhancing overall resilience and enabling healthier lives (PHE, 2019).

2.2. Legal and Ethical Foundations of Health Promotion

Health promotion is strongly rooted in legal and ethical principles that underpin the right to health. International human rights instruments such as the International Covenant on Economic, Social and Cultural Rights (ICESCR, Article 12) oblige states to take steps toward "the prevention, treatment, and control of epidemic, endemic, occupational and other diseases" and to create conditions which assure medical services to all (United Nations, 1966). These mandates align with the WHO's constitution, which calls for "the highest attainable standard of health" for all people (WHO, 1948).

Ethically, health promotion aligns with principles such as justice, autonomy, and beneficence. By empowering individuals and communities, it respects autonomy while supporting informed decision-making. By working to reduce inequities in health, it upholds justice. Moreover, health promotion's orientation toward preventing harm and advancing well-being reflects the principle of beneficence (Seedhouse, 2001). Ethical health

promotion also demands culturally sensitive and participatory approaches, ensuring that interventions are equitable and respectful of diverse values and contexts (Kickbusch, 2021).

Recent literature emphasizes that health promotion extends far beyond individual behaviour change and medical prevention; it now encompasses political, social, and digital dimensions. Kickbusch (2021) argues that "health literacy is inherently a political issue, not merely a technical skill" (p. 499), highlighting the importance of equity, participation, and systemic justice in health promotion initiatives. This perspective underscores that empowering communities is not simply about providing information, but about enabling meaningful engagement with decision-making processes and public health policies.

Nutbeam et al. (2021) similarly note that "the continuing evolution of health promotion requires responsiveness to globalization, urbanization, and environmental challenges" (p. 4), suggesting that traditional approaches must adapt to complex, interconnected determinants of health. They stress the need for strategies that foster healthy public policy, strengthen community action, and build supportive environments, which align directly with ethical principles of justice, autonomy, and beneficence.

Moreover, digital technologies have introduced new ethical and practical challenges. Kickbusch and Holly (2023) highlight that "digital environments constitute a new arena for health creation, demanding strategies that address inequities in access and capability" (p. 3), emphasizing that health promotion must lead in ensuring that digital tools enhance rather than exacerbate disparities. Nutbeam (2021) adds that promoting digital health literacy is critical, arguing that "individuals must be empowered not only to understand health information but to act on it effectively in a digitally mediated world" (p. 12).

Together, these insights extend the ethical framework of health promotion. Interventions must be participatory, culturally sensitive, and politically informed, ensuring that both structural determinants and individual capabilities are addressed. In this way, modern health promotion operationalizes justice and beneficence while respecting autonomy, responding to both longstanding and emerging health inequities.

In summary, health promotion is a foundational strategy in realizing the right to health, distinct from – but complementary to – prevention. It fosters access to quality care, mitigates inequalities, and protects populations from disease by empowering individuals and altering structural determinants. Grounded in both legal frameworks and ethical imperatives, health promotion is essential for sustainable and equitable health advancement.

3. Recent Developments in Public Health and Health Promotion in Relation to the Right to Health

Public health theory has evolved significantly in recent years to better address complex global challenges and social inequities. Below is an overview of what's new in public health and health promotion theory, reflecting current thinking and trends as of the mid-2020s:

3.1. Systems Thinking and Complexity Science

Modern public health increasingly embraces systems thinking to understand how various components of health systems, policies, environments, and individual behaviors interact. Instead of viewing health issues as isolated problems with linear solutions, complexity science sees them as dynamic, interrelated, and adaptive (example: tackling obesity is no longer just about diet and exercise, but involves food systems, urban planning, marketing, socioeconomic status, and more).

3.2. Planetary Health and Eco-Social Theory

A growing body of theory emphasises the interdependence between human health and planetary health. The field of planetary health defines itself as: "the achievement of the highest attainable standard of health, wellbeing, and equity worldwide through judicious attention to the human systems – political, economic, and social – that shape the future of humanity and the Earth's natural systems that define the safe environmental limits within which humanity can flourish." This approach builds on ecosocial theory, which analyzes how ecological and social systems interact to influence population health by considering multi-level, historical, political-economic, and embodied pathways of disease distribution.

Moreover, the planetary health perspective underscores the importance of environmental justice as a crucial public health priority, highlighting how ecological degradation disproportionately impacts marginalized communities and demands equitable solutions

3.3. Health Equity and Structural Determinants

Newer theories emphasize the structural drivers of health inequities, such as racism, colonialism, patriarchy, and economic systems.

There's a shift from individual-level behavior models to structural competency and intersectionality, which recognize how power, identity, and systemic oppression shape health outcomes.

Critical public health challenges dominant narratives and asks: "Health for whom, by whom, and at what cost?"

3.4. Integration of Behavioral and Social Sciences

Contemporary public health theory integrates insights from psychology, sociology, political science, and anthropology. Nudge theory, behavioral economics, and social norms theory are being used to design more effective interventions. Emphasis on co-production and community engagement as a way to respect lived experience and promote health literacy.

3.5. Digital Public Health and Infodemiology

The rise of digital technologies has led to the emergence of digital public health as both a field and a theoretical framework. Focus on how information flows (including misinformation), surveillance, and algorithmic decision-making impact population health.

Infodemiology is a new theoretical and practical approach to studying how information patterns influence health behaviors, especially in pandemics.

3.6. Resilience and Syndemics

Public health theory increasingly uses the concept of syndemics – interacting epidemics that worsen each other in a context of social and structural inequality (e.g., COVID-19 + poverty + mental illness).

Resilience theory is also being used to understand how individuals and communities cope with and recover from shocks. Emphasis on adaptive capacity, especially in light of climate change, migration, and political instability.

Major International and European Conferences on Health Promotion reflects shifts in health promotion toward sustainability, planetary health, equity, and intersectoral collaboration.

Since 2020, there's a stronger integration of health promotion with the SDGs, climate action, and digital health (Table 1).

Table 1. Overview of Major International and European Conferences on Health Promotion (2019–2025)

Conference	Year	Location	Main Theme / Focus	Organizer
10th Global Conference on Health Promotion	2021	Virtual (WHO, Geneva)	Well-being, Health Promotion, and SDGs in the post-COVID world	WHO
24th IUHPE World Conference on Health Promotion	2022	Montreal, Canada	Promoting policies for health, well-being, and equity	IUHPE*
12th IUHPE European Conference on Health Promotion	2024	Łódź, Poland	Cultivating Change Through the Lifespan – Salutogenesis Focus	IUHPE Europe / Medical Univ. Łódź
14th Global Forum on Health Promotion	2024	Geneva, Switzerland	Repositioning health promotion in global health governance	Alliance for Health Promotion
25th IUHPE World Conference on Health Promotion	2025	Abu Dhabi, UAE	Settings for Planetary Health & Well-Being	IUHPE

*IUHPE = International Union for Health Promotion and Education

4. Health Promotion in Novi Sad and the Role of the Institute of Public Health of Vojvodina

4.1. The WHO European Healthy Cities Network: Promoting Health and Well-Being in Urban Settings and Novi Sad's Membership in the WHO EHCN

Urbanization is one of the defining trends of the 21st century, with more than half of the world's population now living in cities. While urban areas offer numerous opportunities for education, employment, and cultural engagement, they also present significant public health challenges. Urban residents are often exposed to environmental pollution, sedentary lifestyles, social inequalities, and increased prevalence of chronic diseases. Recognizing these challenges, the World Health Organization (WHO) Regional Office for Europe initiated the European Healthy Cities Network (EHCN) in 1986. The network provides a collaborative framework for cities to promote health, well-being, and social equity in urban environments.

The European Healthy Cities Network is founded on the principle that local governments have a critical role in shaping the health outcomes of their populations. The network encourages municipalities to adopt a holistic approach to health, emphasizing that health is influenced not only by medical care but also by social, economic, and environmental determinants. Participating cities commit to integrating health considerations

into all aspects of urban planning and governance, including transportation, housing, education, environmental management, and social services. This comprehensive approach ensures that health-promoting strategies are embedded in the broader urban development process.

One of the central pillars of the Healthy Cities approach is intersectoral collaboration. Effective urban health interventions require the engagement of multiple sectors beyond healthcare, such as urban planning, transportation, social services, education, and environmental protection. By fostering cross-sector cooperation, the network enables cities to develop innovative strategies that are both sustainable and inclusive. For example, promoting active transportation such as walking and cycling not only improves residents' physical activity levels but also reduces air pollution and traffic congestion. Similarly, urban green spaces provide vital areas for recreation, relaxation, and social interaction, contributing to both physical and mental well-being.

Equity is another fundamental focus of the network. Health inequalities remain a major concern in European cities, where socio-economic disparities significantly influence health outcomes. The European Healthy Cities Network emphasizes the need to address these inequities by targeting vulnerable populations and ensuring that all residents benefit from health-promoting policies, regardless of age, gender, income, or ethnic background. Examples of initiatives include community-based health programs, accessible preventive services, and policies addressing housing quality, employment opportunities, and social inclusion.

The network operates through city-to-city collaboration, knowledge sharing, and capacity building. Participating municipalities are encouraged to establish local health objectives, implement innovative programs, and evaluate their outcomes. Regular conferences, workshops, and peer review processes facilitate the exchange of best practices. For instance, a city that successfully reduces smoking rates among adolescents may share its strategies with other cities seeking to achieve similar outcomes. Such knowledge transfer strengthens the effectiveness of urban health initiatives across Europe.

Evaluation and monitoring are essential components of the Healthy Cities framework. Cities collect data on health indicators, assess intervention outcomes, and adjust policies based on evidence. This evidence-based approach ensures accountability while contributing to a broader understanding of urban health. Collaborations with academic institutions help cities identify innovative solutions to emerging challenges, such as climate change impacts, mental health issues, and the effects of social isolation on vulnerable populations.

The city of Novi Sad in Serbia serves as an example of a municipality actively participating in the European Healthy Cities Network. Novi Sad became a member of the

network in the 2000s and has since demonstrated a strong commitment to promoting health and well-being at the local level. Through strategic planning, the city has integrated health considerations into urban governance, fostering intersectoral cooperation, community participation, and programs aimed at improving environmental quality and social inclusion. In recognition of its ongoing achievements, Novi Sad has recently transitioned into the 8th phase of the Healthy Cities project. This advancement reflects the city's commitment to sustaining long-term health initiatives, further developing strategic health objectives, and strengthening its capacity for innovative public health interventions. The city's experience illustrates how municipalities can actively implement the Healthy Cities principles while adapting them to local contexts and priorities.

Membership in the European Healthy Cities Network offers several advantages. Cities benefit from technical support, policy guidance, and access to a network of peers who share experiences and best practices. Participation also provides opportunities for collaborative research, pilot programs, and innovative projects. Importantly, it strengthens the city's capacity to respond to emerging public health challenges in a coordinated and evidence-based manner. By adopting the Healthy Cities framework, municipalities can improve not only the physical health of residents but also social cohesion, community resilience, and overall quality of life.

Since its inception, the European Healthy Cities Network has expanded significantly, encompassing hundreds of cities across Europe. Success stories from member cities demonstrate measurable improvements in public health, such as reduced air pollution, increased levels of physical activity, enhanced mental well-being, and decreased social inequalities. These outcomes highlight the effectiveness of the Healthy Cities approach in promoting both individual and collective health. Moreover, the network serves as a model for other regions worldwide, demonstrating how local action, guided by global principles, can make a substantial impact on public health outcomes.

The European Healthy Cities Network represents a pioneering model for urban health promotion. By emphasizing intersectoral collaboration, equity, community engagement, and evidence-based policymaking, the network helps cities address the complex determinants of health in urban environments. The city of Novi Sad exemplifies how municipalities can successfully integrate these principles into local governance, progressing through project phases and continually enhancing health initiatives. As urbanization continues to accelerate across Europe, networks like the European Healthy Cities Network are essential for ensuring that cities remain places where residents can live healthy, equitable, and fulfilling lives. The network demonstrates that sustainable improvements in urban health are achievable when local governments, communities, and stakeholders work together with a shared vision for well-being.

The Institute of Public Health of Vojvodina (Institute/IPHV) has been a cornerstone institution in facilitating Novi Sad's membership and active participation in the WHO European Healthy Cities Network (WHO EHCN). Since Novi Sad's admission to the network in 2012, the Institute has provided both strategic guidance and operational leadership, ensuring that the city's health promotion activities align with WHO standards and principles.

At the core of its contributions lies the coordination of intersectoral cooperation. The Institute has successfully brought together municipal authorities, local health services, educational institutions, and civil society organizations to jointly plan and implement initiatives that advance population health. Through this collaborative framework, Novi Sad has been able to embed health as a cross-cutting priority across various aspects of local governance, including education, social policy, environmental protection, and urban planning.

One of the Institute's central responsibilities has been the development of evidence-based programs and strategic plans, which are crucial for Novi Sad to maintain its Healthy City status. For instance, by conducting health needs assessments and producing health profiles, the Institute ensures that interventions are tailored to the actual epidemiological and socio-economic conditions of the population. These assessments provide a foundation for designing multisectoral action plans that focus on reducing risk factors, preventing chronic diseases, and improving health literacy.

Furthermore, the Institute has been instrumental in advocating for sustained political commitment to the Healthy Cities agenda. The endorsement of the City Assembly of Novi Sad in 2014 for participation in Phase VI of the network was largely the result of the Institute's efforts in demonstrating the value of such membership. The transition into Phase VII further reflects this long-term institutional support. By linking global health objectives with local implementation, the Institute ensures that Novi Sad is not only a participant in an international initiative but also a model of translating WHO's priorities into measurable local outcomes.

Through conferences, publications, and public events, the Institute has also raised the visibility of Novi Sad's membership, both nationally and internationally. These platforms have enabled the city to share experiences, showcase innovations, and exchange best practices with other members of the network. At the same time, the Institute provides mechanisms for continuous evaluation and accountability, ensuring that progress is measured and communicated.

The impact of this role can be seen in the integration of health promotion principles into Novi Sad's development strategies. From creating healthier public spaces to

implementing targeted campaigns on vaccination, nutrition, and mental health, the Institute ensures that the Healthy Cities framework is more than a symbolic commitment. It represents a structured, systematic approach to improving the quality of life of all citizens, reinforcing the city's identity as a community dedicated to health, sustainability, and equity.

4.2. The Program "Improving population health literacy – 'Knowledge for Healthy Choices'"

Health promotion programme (shortened): 'Knowledge for Healthy Choices' (serb. "Znanjem do zdravih izbora"), represents one of the most comprehensive health literacy initiatives implemented in the Autonomous Province of Vojvodina from 2018 to 2024. Developed by the Institute of Public Health of Vojvodina, the program directly responded to gaps in health literacy that led to unhealthy lifestyle choices, including poor nutrition and physical inactivity. Its primary objective was to empower individuals with scientifically validated, accessible, and culturally appropriate information that could guide healthier everyday decisions.

The methodology combined empirical research with practical application. A multidisciplinary team – including experts in medicine, public health, pedagogy, and psychology – designed educational content tailored to the needs of different population groups. Materials were carefully pre-tested through focus groups, while anonymous surveys measured the effectiveness and user satisfaction after implementation. Initially funded by the City of Novi Sad, the program later received financial backing from the Autonomous Province of Vojvodina, ensuring its continuity and expansion across the region.

The program produced a remarkable output of 61 distinct publications across 14 thematic areas, including nutrition, physical activity, oral health, tobacco and alcohol prevention, sexual and reproductive health, psychoactive substance prevention, breastfeeding promotion, immunization, child development, prevention of chronic noncommunicable diseases, and ecology. In total, more than 408,000 printed materials were disseminated throughout the province. These included 188,880 flyers, 85,000 leaflets, 105,500 posters, and 26,800 brochures. Each piece of material was designed to be visually appealing, concise, and adapted to different literacy levels.

In addition to traditional print resources, the program placed significant emphasis on digital innovation. A dedicated website (https://izjzv.org.rs/app/-znanjem do zdravih izbora/), enriched with QR codes on printed materials, allowed users immediate access to digital versions of health education tools. The digital resources in-

cluded 39 PowerPoint presentations used in 44 health centres across Vojvodina, 16 podcast episodes covering diverse health topics, and a mobile application for smoking cessation. The app, still in its pilot phase, has shown encouraging results in helping individuals reduce or quit smoking. Evaluation data revealed a high satisfaction score of 4.85 out of 5 among users, highlighting the program's ability to resonate with the target audience.

By integrating traditional and modern channels of communication, the program achieved wide population coverage while maintaining personalized engagement. It addressed not only knowledge gaps but also behavioral and motivational aspects of lifestyle change. Its success lies in the innovative blend of evidence-based science, user-centered design, and multi-platform dissemination.

Overall, 'Knowledge for Healthy Choices' illustrates the Institute of Public Health of Vojvodina's leadership in health promotion and literacy. It demonstrates how a regional institution, working in close cooperation with local governments and communities, can create sustainable health education systems that reduce risk factors for chronic diseases and advance equity in health. The program's adaptability, strong user satisfaction, and innovative resources establish it as a model for replication in other regions, both nationally and internationally.

4.3. The Program 'Support from the Very Beginning'

The program 'Support from the Very Beginning' (serb. „Podrška od samog početka") focuses on promoting mental health and family well-being, starting from the earliest stages of life. Introduced in 2020 under the Special Public Health Program of Vojvodina, it is implemented by the Institute of Public Health of Vojvodina in partnership with regional public health institutes and under the support of the Provincial Secretariat for Health.

This program acknowledges the importance of mental health as a foundation for overall health and development. It targets families at critical life stages: forming partnerships, preparing for parenthood, raising preschool children, and supporting school-aged children in their academic and social development. By addressing these transitional periods, the program helps families build resilience, communication skills, and coping mechanisms.

Key areas of focus include: Support for families with experience of infertility; Support for parents of children with developmental disorders and chronic health conditions; Support for parents of preschool-aged children; Support for parents of children in early school years; The first years of living together; From partnership to parenthood: How to prepare psychologically while expecting a baby; Support for families with experience of miscarriage; First steps in parenting; Support for parents of children in older

primary school years; Support for parents of adolescents; Child development and mental health. These topics are addressed through brochures and expert blog articles available on the program's website: https://izjzv.org.rs/app/podrska_od_samog_pocetka/

The program also places strong emphasis on collaboration between schools and parents, encouraging a partnership that benefits children's academic success and emotional well-being.

These resources are designed not only to provide information but also to offer emotional reassurance to families facing challenges.

The broader significance of the program lies in its preventive orientation. By supporting mental health from the very beginning, the program reduces the likelihood of more serious problems emerging later in life. It promotes a culture in which seeking help is normalized and where families are equipped with the knowledge and tools to support one another. This approach directly contributes to public health goals of reducing the burden of mental illness and promoting social cohesion.

Through 'Support from the Very Beginning,' the Institute demonstrates its commitment to an inclusive and proactive model of mental health promotion – one that recognizes the family as both a unit of care and a source of strength for individuals and communities alike.

4.4. Long-Standing Health Promotion Programs in Novi Sad: Partnership between the Institute of Public Health of Vojvodina and the City Government

The Institute of Public Health of Vojvodina (Institute) is the leading regional public health institution based in Novi Sad. Beyond laboratory and surveillance functions, the Institute has a strong, decades-long portfolio in health education and community programs delivered with the City of Novi Sad's Department of Health. These activities target schools, families, workplaces, and the general public, and they emphasize prevention, equity, and intersectoral collaboration.

4.4.1. "October – Month of Healthy Nutrition"

"October – Month of Healthy Nutrition" is a national campaign observed annually, with the Institute coordinating local actions in Novi Sad and South Backa District. The theme underscores healthy eating as a cornerstone for preventing non-communicable diseases and for establishing habits early – especially among children and youth. Typical activities include educational sessions, demonstrations of balanced meals, media pieces, and school-based workshops.

Recent examples illustrate the practical, community-oriented approach. In October 2024 the Institute, supported by the City of Novi Sad's Health Department, organized a live demonstration of healthy meal preparation for first-grade pupils at a local primary school, working with university students and teachers to translate dietary guidelines into child-friendly practice. Such hands-on activities blend nutrition science with behavior-change techniques to make messages tangible for children and their caregivers.

The campaign typically aligns with global and European observances – World Food Day on 16 October and the European Day of Healthy Eating and Cooking with Children in early November – allowing Novi Sad's local activities to ride broader awareness waves while tailoring content to the local context.

Why it matters: Early nutrition shapes lifelong health trajectories. By reaching families and schools every October – and keeping messaging practical (shopping lists, cooking demos, lunchbox tips) – the Institute helps normalize healthy eating as a civic value rather than a private pursuit.

4.4.2. "Educational Calendar for Children" (Since mid-2000s)

One of the Institute's signature tools is its annual "Educational Calendar for Children," developed by the Center for Health Promotion and widely distributed to kindergartens and lower primary grades, with the City of Novi Sad's support. The calendar pairs monthly topics with classroom activities and at-home prompts for children aged roughly 6–10, and the Institute typically provides a short guide for teachers and parents.

Themes change from year to year, reflecting current public health priorities and children's everyday realities: 2024: „Healthy nutrition"; 2023: "Stop, Look, Listen – Be Safe in Traffic" – a digital calendar with a user manual, emphasizing pedestrian safety and everyday traffic awareness for young pupils; 2022: Environment and Health – clean air, safe water, urban greenery, energy saving, waste sorting, and hygiene in shared spaces; designed as a colorful six-leaf calendar to anchor environmental stewardship in daily routines; 2021 (pandemic context): "Let's Beat Corona" – practical hygiene, mask use, physical distancing, vaccine basics, and emotional coping, adapted for children and classrooms etc.

Media and local outlets routinely report on the calendars and their classroom uptake, noting both their interactivity and alignment with up-to-date guidance. Over time, the series has become a recognizable resource in Novi Sad's schools, thanks to municipal backing.

The calendar is more than a poster; it's a year-long micro-curriculum that prompts teachers and families to revisit health topics monthly. For the past seven years, a QR code has been included, allowing the calendar to be downloaded in digital format.

Trainings for educators and teachers are often accredited, ensuring professional recognition. Its longevity and municipal support signal continuity – key for habit formation in early childhood.

4.4.3. "All Together for Better Mental Health" with the Festival of Mental Health as the Flagship Platform

Under the umbrella "All Together for Better Mental Health in Novi Sad (serb. „Svi zajedno za bolje mentalno zdravlje u Novom Sadu"), the Institute coordinates awareness-raising, capacity-building, and community events, in partnership with the City of Novi Sad and numerous civil-society and professional organizations, which are joined in the informal network for better mental health "Karika". A centerpiece of these efforts is the Festival of Mental Health (FMH), held annually around World Mental Health Day (10-20th of October), which this year is being held for the 10th time, under the theme "Values and Mental Health" and the slogan "Developing Values."

The festival has grown into a multi-day, multi-venue event across Novi Sad and partner cities, mixing public lectures, workshops (mindfulness, coping skills, parenting support), walks, cultural events, creative sessions, and debates. In 2023 the 8th FMH ran 10–20 October under the slogan "Empathy," while 2024 marked the 9th edition with the theme "Our Relationship to Change," continuing a tradition of topical, community-relevant programming. Municipal support is explicitly tied to the "All Together for Better Mental Health" project framework.

Beyond Novi Sad, the festival model has diffused regionally. By 2024, with the support of the Provincial Secretariat for Health of the Autonomous Province of Vojvodina, activities also took place in Subotica and Sombor (third year), and in Zrenjanin, Pančevo, Kragujevac, and several Montenegrin cities (second year), expanding peer learning and public engagement on mental health across the wider area.

The project regularly includes targeted sub-initiatives – media literacy and ethical reporting contests for journalists; photo-story competitions on solidarity; and youth-oriented sessions hosted with partners like Youth Association Federation "OPENS" – each aimed at shaping social norms and supportive narratives around mental health.

Stigma and misinformation continue to act as barriers to care. By making mental health visible, practical, and communal – with accessible, free events and skill-building workshops – the festival reframes mental well-being as a shared responsibility and an essential everyday skill, rather than a niche concern.

4.4.4. "All Together for Public Health"

Parallel to mental-health–specific efforts, the IPHV runs the recurring project "All Together for Public Health" (serb. "Zajedno za javno zdravlje"), also supported by the City of Novi Sad. The project modernizes public-health communication through new podcast episodes on https://izjzv.org.rs/app/znanjem_do_zdravih_izbora/podcast.php, expanded digital access to educational materials, and more active social-media channels – meeting residents where they already seek information. In 2022 and 2023, the Institute reported completing the project for the fourth and fifth time, respectively, underscoring its continuity and iterative improvement.

The Institute's YouTube channel hosts many of these educational videos (e.g., healthy nutrition, general immunization, HPV vaccination, tobacco prevention, oral health, prevention of vector-born diseases, breastfeeding, rational use of antibiotics), providing a durable library teachers, parents, and community workers can reuse throughout the year.

Trusted, high-quality public-health messaging must compete with widespread information overload. By serializing content and adapting it to platform-specific formats, the Institute builds familiarity, credibility, and reach, while the City's primary health centers ensures stable and sustained resourcing.

4.4.5. "The Health Code"

The "Health Code" (serb. "Kôd zdravlja") project is a long-standing initiative aimed at promoting health literacy and preventive healthcare among the population of Novi Sad. Implemented by the IPHV in collaboration with the City Health Department**,** the project focuses on enhancing public awareness about various health topics through accessible and engaging formats, including educational campaigns, community workshops, and digital and printed materials.

A distinctive feature of the "Health Code" project is its origin from a numerical coding system developed by the World Heart Federation (WHF) to track cardiovascular risk profiles. The original code 0-3-5-140-5-3-0 represents specific health parameters, with each number corresponding to a measurable factor:

- First and last digits (0): absence of smoking and normal blood glucose (no diabetes)
- First "3" (second digit): recommended daily physical activity – 3 km walking or 30 minutes of exercise
- First "5" (third digit): daily intake of 5 portions of fruits and vegetables
- 140 (fourth digit): systolic blood pressure in mmHg

- Second “5” (fifth digit): upper limit of total cholesterol (in mmol/l)
- Second “3” (sixth digit): upper limit of LDL (“bad”) cholesterol (in mmol/l)

When adapted locally as 0-3-5-140-5-3-0, the code emphasizes active engagement and monitoring, guiding citizens to understand and manage their health risks. The general objective of the project is the prevention of chronic non-communicable diseases (NCDs). As part of the initiative, the Institute of Public Health of Vojvodina has developed a dedicated website (https://www.izjzv.org.-rs/app/kod_zdravlja/) as well as numerous posters, flyers, and leaflets. These materials provide practical guidance on population screening programs, the frequency of preventive check-ups by age and sex, and immediate responses to heart attack, stroke, and early signs of diabetes, thereby combining educational content with actionable health information for all citizens.

Cross-Cutting Features of Novi Sad’s Health Promotion Model: 1) *Municipal Primary health care centres and Intersectoral Partnerships.* These programs consistently cite support from the City of Novi Sad’s Department of Health (and, for mental health, contributions from the Provincial Secretariat), anchoring activities in local governance and enabling collaboration with schools, universities, NGOs, and media. 2) *Lifecycle Approach with Child-Centered Anchors.* The Educational Calendar and October nutrition activities concentrate on young children and families – where prevention has the highest lifetime yield – while festival programming and citywide campaigns address adolescents, adults, and seniors via tailored formats. 3) *Evidence-Informed, Theme-Based, and Iterative.* Annual themes (nutrition; traffic safety; empathy; change) respond to epidemiologic priorities and social context, with materials and formats refined year to year. The repetition – every October, every school year – builds recognition and sustained engagement. 4) *Scaling and Knowledge Diffusion*. The Festival’s spread to other cities shows the model’s transferability: Novi Sad serves as a hub, but the approach is adaptable and collaborative, consistent with European “Healthy Cities” principles that emphasize peer learning and local ownership. 5) *Illustrative Yearly Cycle* (Example): January–March: New Educational Calendar released with guide for teachers/parents; training and dissemination to schools (digital and print); Spring/Summer: Podcast and social content production under “All Together for Public Health”; topic series tied to seasonal risks (heat, vectors, recreation); October: “Month of Proper Nutrition” activities (school workshops, cooking demos, media pieces) and the Festival of Mental Health (10–20 October), with city-backed programming for all ages; Year-Round: Competitions and targeted calls (journalism ethics, photo stories) that extend the conversation and incentivize pro-social, stigma-reducing narratives. 6) *Impact and Public Value.* While comprehensive evaluation results are typically reported internally, the longevity and routine renewal of these projects – some running for well over a decade – indicate strong institutional ownership and

community uptake, as well as consistent municipal support. Media coverage, partner engagement, and sustained distribution in schools suggest the initiatives successfully embed health messages into daily life in Novi Sad. The Institute's continued emphasis on accessible, child-friendly materials and on open community events – paired with modernized digital communication – positions Novi Sad as an active, learning city for public health.

5. Conclusion

The initiatives led by the Institute of Public Health of Vojvodina exemplify the transformative potential of local health promotion strategies when grounded in evidence, inclusivity, and intersectoral collaboration. Novi Sad's membership in the WHO European Healthy Cities Network demonstrates how municipal and institutional partnerships can translate global health objectives into concrete local improvements. The city's recent transition into the 8th phase of the Healthy Cities project underscores its commitment to sustaining long-term health initiatives, strengthening strategic health objectives, and enhancing capacity for innovative public health interventions.

Long-standing programs such as "Health Code", October – Month of Healthy Nutrition, the Educational Calendar for Children, the Festival of Mental Health, and "All Together for Public Health" illustrate a comprehensive, multi-layered approach to health promotion. The Health Code, adapted from the World Heart Federation's cardiovascular risk profile (originally 0-3-5-140-5-3-0), serves both as a technical tool and as an educational symbol. It highlights measurable health targets, including daily physical activity, fruit and vegetable intake, blood pressure, cholesterol levels, absence of smoking, and normal blood glucose, helping citizens understand and adopt healthier lifestyles.

Two major programs further showcase the Institute's role in addressing health literacy and family well-being: 1. "Knowledge for Healthy Choices" (2018–2024) empowered residents with evidence-based, accessible, and culturally tailored information across 14 thematic areas – from nutrition and physical activity to preventive care and substance use – through printed materials, digital content, podcasts, and mobile applications. It reached over 400,000 individuals and demonstrated high user satisfaction, illustrating how a regional public health institution can establish sustainable health education systems. 2. "Support from the Very Beginning" (since 2020) targets mental health and family resilience from the earliest stages of life. By providing guidance for parents, psychological support for families facing challenges, and collaboration with schools, the program fosters preventive mental health practices, strengthens family bonds, and promotes social cohesion.

These initiatives collectively demonstrate several cross-cutting features: 1) Municipal Primary Health centers and Intersectoral Collaboration: Programs are anchored in local governance, with active engagement from health centers, kindergartens, schools, universities, NGOs, health-aligned enterprises and media. 2) Lifecycle Approach: Child-centered interventions address early prevention, while adolescents, adults, and seniors are reached through tailored citywide campaigns and festivals. 3) Evidence-Informed and Iterative Design: Annual themes and repeated programming build recognition, sustained engagement, and responsiveness to evolving epidemiologic and social contexts. 4) Scaling and Knowledge Diffusion: Initiatives, such as the Mental Health Festival, extend beyond Novi Sad, demonstrating transferability consistent with European Healthy Cities principles.

The longevity and routine renewal of these programs – some operating for over a two decade – reflect strong institutional ownership, municipal support, and community uptake. They highlight the importance of an integrated, equity-oriented approach that goes beyond healthcare, encompassing education, social support, urban planning, and policy-making. By combining global frameworks with local realities, the Institute ensures that health promotion is continuous, evidence-based, and empowering for all residents.

In conclusion, the Institute of Public Health of Vojvodina stands as a central actor in fostering health equity, literacy, and sustainability in Novi Sad and the Autonomous Province of Vojvodina. Its programs provide a blueprint for how community-driven, policy-supported, and evidence-informed health promotion can create lasting improvements in population health and quality of life, serving as a model for municipalities both nationally and internationally.

Moreover, these initiatives explicitly support the right to health, as recognized in international frameworks such as the Universal Declaration of Human Rights and the WHO Constitution. By providing equitable access to health education, preventive services, and community resources, the Institute ensures that all residents of Novi Sad – regardless of age, gender, socioeconomic status, or background – can exercise their fundamental right to achieve the highest attainable standard of health. Programs such as the Health Code, Knowledge for Healthy Choices, and Support from the Very Beginning operationalize this right by translating abstract principles into concrete, accessible, and actionable interventions.

In practice, the Institute's work demonstrates that the right to health extends beyond healthcare provision. It encompasses health literacy, mental well-being, healthy urban environments, and supportive social policies. By embedding health promotion across sectors – education, urban planning, environmental protection, and social services – these programs ensure that health is treated as a shared societal responsibility, not merely an

individual concern. In this way, Novi Sad's model illustrates how municipalities can actively fulfill citizens' right to health, bridging global norms with local implementation, and fostering a culture where preventive care, informed decision-making, and social equity are integral to daily life.

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