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New knowledge and operative framework of urban health

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Abstract. It is easy to understand how healthy choices bring us to an healthy life. The capability of adopt healthy lifestyles is due by opportunities, possibilities and personal motivation, all variabilities influenced by external factors. Some citizens, unlike others, have easy access to affordable, fresh and healthy foods. Some citizens, similar to others, have easy access to safe places where to walk, run, ride bicycles and play. This also shows that when some vulnerable groups get sick, the impact is wider, and the consequences are worse. The issue of the social-health inequality has gained global relevance after the Covid-19 pandemic. The Coronavirus has damaged different populations that were already fighting predictable diseases such as obesity, diabetes, cardiovascular pathologies, and cancers. This has underlined the need to establish collaboration throughout the different sectors in order to reduce the spread of predictable diseases. The solutions are known. If we offer the right incentives, we can modify the social and economic environments that affect the risk factor in order to gradually solve the gap regarding health inequalities. Cities have an important responsibility regarding this, other than the possibility of taking a lead role in promoting innovative solutions that create healthy and sustainable spaces and communities to support citizens in adopting healthy choices. But specialists, who can develop multi-sectorial plans and deal with the different aspects that operate in a city's social health system, are needed. In this context, new professional competencies like Health City Managers (HCM), who are able to elaborate on Urban Health Framework (UHF), appear necessary to facilitate the collaboration between public health entities to grant the creation of healthy environments. The HCM approach analyses the different factors that affect environment, where public and private sectors can operate in a functional way. (www.actabiomedica.it)

Key words: urban health, health city manager, urban health framework, salutogenic cities, healthy strategies, policies and actions

Introduction

Urbanisation is one of the major tendencies within the 21st century and it has a significant impact on health. Over 55% of the global population lives in urban areas; this percentage should rise to 68% by 2050. Most of the incoming urban sceneries will take place in the developing nations.Today the world has the great chance to manage the developing of the incoming urban sceneries, considering the health subject. This is mostly relevant because citizens' health is probably the most important and precious value of each community.

However, most of the 4.2 billion people living in cities suffer from inadequate housing and transportation, poor sanitary conditions, waste management, and air quality that does not meet WHO guidelines. Other forms of pollution, such as noise or excessive lighting, water and soil contamination, urban heat islands, and a lack of space for walking, cycling, and active living, further contribute to making cities not only epicentres of infectious diseases but also non-communicable diseases and negative drivers of climate change.

Non-communicable diseases (NCDs) like heart disease, cancer, asthma, and diabetes are exacerbated by unhealthy living and working conditions, inadequate green spaces, air and environmental pollution such as noise, water, and soil contamination, rising temperatures, and a lack of space for active living. Diabetes is linked to obesity and physical inactivity, especially in cities lacking good transport infrastructure and active mobility options for walking and cycling. Urbanization is also linked to high rates of depression, anxiety, mental illnesses, and neurodegenerative diseases.

Cities' responses to health challenges must consider multiple threats: increasing levels of inequality, non-communicable diseases, communicable diseases like COVID-19, persistently high rates of road accidents, and the impact of climate change. These responses must also be multisectoral, ensuring that urban housing, employment, food, and transportation policies work together to have a positive impact.

Some cities are reacting rapidly and innovatively to public health threats, building on existing urban networks and partnerships with communities to best meet the needs of their populations, sharing their experiences, and learning from others. Many of these initiatives are strengthening resilience and will be important in shaping future urban health policy, aided by the data they can access and the predictive models they can use, such as digital twins or others.

Urban health is the science that studies the correlations between urbanization and health, through multidisciplinary interventions capable of analysing and monitoring health determinants to help local decision-makers quantify the impact of urban health risks and estimate the savings resulting from investment in urban policies that promote health. It supports urban policies promoting health as a common good, preventing diseases, and fostering collaboration between cities.

The development and training of new professional skills, such as the Health City Manager, aim to manage and coordinate urban health interventions and promote the perspective of health as a common good.

To promote this vision at all institutional and decision-making levels so that a greater awareness of the urgency imposed by the issue of health in urban areas can mature, the figure of the Health City Manager could prove useful, a professional profile whose establishment was also proposed at the European level within the framework of the opinion initiative "Health in cities: a common good" (EU Committee of the Regions, May 2017). This figure, which should have professional skills in public health management, sociology, community psychology, urban architecture, and control in reducing social and health inequalities, could help increase the administrative capacity of local authorities and develop innovative and inclusive solutions in response to health and wellness issues expressed by citizens, guiding cities towards a Healthy City model.

The establishment of a training path for "Health City Managers," promoted in 2022 by the National Association of Italian Municipalities (ANCI), and the Health City Institute (HCI), involves approximately 8,000 Italian municipalities. This initiative reflects a broader focus on urban health, examining the impact of urbanization on health determinants and e enmphasizing the need for a multidisciplinary approach. It also calls for a full involvement of local institutions, such as municipalities and health authorities, which

can significantly influence citizens' quality of life and lifestyles through targeted public policies. ù

The opinion initiative, inspired by the "Manifesto on health in cities as a common good" drafted in 2016 by the Health City Institute, involving 120 experts, and signed by the Ministry of Health and ANCI, already identified as a qualifying point the need to create, at the level of municipal administrations and Local Health Authorities, professional and administrative skills in public health management, attributable to the figure of the Health City Manager, as a professional with defined competencies, capable of operating in synergy with the mayor and local administrators to coordinate and implement actions concerning public health, developing innovative and inclusive solutions in response to the issues expressed by citizens. This point was entirely taken up by the Rome Urban Health Declaration document signed during the Italian presidency of the G7 on December 11, 2017.

Creating a core training curriculum has allowed the identification of knowledge, skills, and abilities related to the profile on ten management process objectives.

Therefore, this is a professional figure whose establishment has benefited from a solid validation process at both political-institutional and academic-scientific levels, to converge, starting from 2021, in a high-level training path carried out by ANCI in collaboration with the Department for Youth Policies and under the scientific coordination of the Health City Institute and the Sapienza University of Rome, leading to the inclusion of this professional figure in some metropolitan cities, such as Genoa and Palermo, but also the implementation of some management experiences in the cities of Bari, Bergamo, Imola, Sanluri, Milan, Turin, with the insertion of the Health City Manager in the management structures of the cities involved.

These professionals need operational planning tools administration that can systematize interventions in collaboration with other professionals and various municipal administration departments.

Already in 2021, the Ministry of Health in the "Guidance Document for urban planning from a Public Health perspective," a document developed to identify criteria to help operators and decision-makers in evaluating urban planning aimed at promoting health and correct lifestyles and in the perspective of Urban

Health, identified the professional figure of the Health City Manager as a professional who works closely with the Mayor, Councilors, and political decision-makers already operating in Municipalities (Mobility / Disability / Smart City Manager) and in Territories, such as, for example, doctors and epidemiologists working in local health agencies (ASL, ATS, etc.). The contemporary debate, moreover, is oriented and focuses precisely on the urgent need to restore the same collaboration between the design (architectural and urban) component and the health professions, as was characteristic of the 19th century when the most important European metropolises underwent profound urban transformations for the purposes of Environmental Hygiene and Public Health, even before environmental sustainability, which was not a priority objective at the time.

On the occasion of the Italian Presidency of the G20, in the bridge event on June 21, 2021, "Health in the cities: key priorities for the Italian G20 2021: global health for the future of people, planet, prosperity," an Italian urban health declaration was drawn up by a group of experts, recommending that the Governments of G20 countries commit to developing policies and actions capable of:

- Investing in promoting health and well-being in cities;
- Addressing social and cultural determinants for equitable health for all citizens;
- Integrating health into all urban policies;
- Involving and engaging local communities in ensuring sustainable health solutions;
- Creating solutions in partnership with other sectors to create a new concept of the city.

The recommendations of the document are echoed in the G20 Rome Leaders Declaration, which at point No. 20 "Cities and Circular Economy," states: "We commit to increase resource efficiency, including through the G20 Resource Efficiency Dialogue and recognize the importance of cities as enablers of sustainable development and the need to improve sustainability, health, resilience, and well-being in urban contexts as underlined by the Habitat III New Urban Agenda. With the involvement of businesses, citizens, academia, and civil society organizations […]".

In this context, moreover, the COVID-19 pandemic has highlighted the need for a new concept of community well-being, in relation to the built environment, and Public Health, shifting from a medical model focused on the individual to a social model, where health is considered as the result of the interaction between various socio-economic, cultural, and environmental elements, the so-called distal determinants of health and disease. It is therefore necessary to strengthen multidisciplinary collaboration between designers (urban planners, architects, transportation experts, etc.), Public Health experts (hygienists and healthcare professionals), and Policy Makers, developing systemic operational skills capable of addressing the complexity of managing urban contexts. It is necessary to make contemporary cities more resilient to health and environmental emergencies, ensuring an effective initial response from the territory and healthcare infrastructure to address possible future health emergencies better. The city and healthcare welfare are, in fact, closely related and together become the arena where the challenges of our time are played out. But this requires urban health planners.

Health City Managers and Policy Makers should collaboratively promote the digitization of urban contexts. This includes promoting the realization of Smart Communities not only for population monitoring but also for the rapid and systematic dissemination of information. The use of IoT (Internet of Things) systems would allow rapid and significant data collection actions. An example could be represented by integrated monitoring stations, equipped with sensors capable of detecting and evaluating the presence of various atmospheric agents, including pollutants, physical parameters such as sound pressure, and meteorological parameters such as temperature, air humidity, wind speed, and direction.

The collected data could be used in an aggregated manner, allowing us to test the effectiveness of temporary and experimental urban projects (Tactical Urbanism) and, if necessary, to reconfigure them appropriately. In this regard, current urban monitoring networks, aimed at controlling air and water quality, could represent a useful starting point for the implementation of these systems.

Operational framework on urban health

The development of an operational framework is necessary to guide those working on urban health in cities, closely collaborating with municipal administrators and health administrators, understand what it takes to develop specific prevention plans and program subsequent health promotion interventions.

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The use of an operational framework, already studied by UCL and the Steno Center in Copenhagen, offers a structured approach in six steps along the path from defining the problem to implementing and evaluating a solution, drawing on and incorporating the basic principles of development in promoting health and well-being at the city level, addressing social and cultural factors, and striving for health equity. Integrating health and healthcare into all policies to engage communities in developing solutions that aim to promote health as a common good, through the development of factual synergies and partnerships among different actors in the system and across sectors.

The Urban Health Framework (UHF) must be seen as a dynamic platform at the level of individual urban realities and not as a model that fits all cities, a model that will evolve over time, based on the socio-demographic-urban development context and new scientific evidence, to be periodically updated with new tools, cases, and other content required to adapt to new scenarios. It was developed for Health City Managers as project leaders, teams, and anyone interested in creating sustainable public health prevention interventions.

It has also been developed for various users in different fields and aims to create a common front among all stakeholders to promote health at the urban level and increase well-being in cities.

The Urban Health Framework (UHF) offers a structured approach to the development, planning, verification, and evaluation of interventions, providing tools for each of the processes and cases presented as examples that illustrate best practices implemented in

various social and urban contexts, all through successive operational steps capable of creating a path and a plan to structure an intervention to address a public health issue.

The Urban Health Framework (UHF), through a "toolbox," provides the necessary tools to support the development of public health interventions focusing on the common good at each step. Additionally, through a catalogue of cases and best practices, it aims to provide insights from which to draw inspiration from the best practices that have completed interventions. These cases aim to give a concrete idea of what it takes to develop and implement an intervention.

Regardless of the initial motivation for undertaking an intervention, the following priorities should always be considered by the Health City Manager:

- Formation of an urban health core team
- Assessment of the intervention's necessity and context mapping
- Examination of available time and resources
- Definition of one's expectations and the corresponding path for their achievement
- Identification and involvement of all stakeholders involved in the identified reality.

The urban health core team, which should be composed of individuals with diverse skills and experiences related to the intervention, will be responsible for managing the operability. It is advisable to create an interdisciplinary team that can adopt a holistic approach to problem-solving.

Regarding the assessment of the intervention's necessity, it is necessary to consider whether the intervention has been commissioned to address a clearly defined challenge and within what context within the political-administrative priorities of the city administration it is positioned. However, if there are already interventions in place to address the challenge, it is important to ensure that what is being undertaken improves upon what already exists and aligns with them in terms of continuity.

The examination of available time and resources must take into account the requests and limits set by the funders and/or commissioners of the intervention regarding its development and scope, for example, the use of digital tools, human and financial resources, timelines,

and other essential elements for the development and success of what is to be implemented. Before starting a development phase, it is also advisable to roughly assess whether additional resources will be needed to achieve the minimum acceptable level of success, in case it should be known where to obtain such additional resources.

It is important to define one's expectations, ensuring that before starting, the core team and potential partners, funders, and commissioners are aligned with the objectives and timing necessary to achieve them, and if the project can be developed on a larger scale or expanded beyond the original proposals, creating alignment from the beginning between one's expectations and those of the context in which one operates and the stakeholders involved. Only through proper identification and full involvement of all stakeholders will it be possible to define a co-programmed and co-decided path of pursuit of expectations, capable of ensuring the maximum impact of the actions generated.

The steps guiding action

The Urban Health Framework (UHF) cannot do without a strategic planning of the interventions and the phases of the plan to be developed and guide the action, starting as the first step from defining the problem, through identifying the related data, analysing the data and the context, to producing a problem statement.

The final product of this step will include a problem statement and an intervention objective statement that summarizes the problem and outlines:

- What needs to change
- Who will be impacted by the change
- Where will the change occur
- When will the change occur and for how long the transition is estimated.

This statement should be used in the next step either to determine how the intervention objective will be achieved by setting specific milestones.

As the second step, commitment feedback should be considered through a survey of stakeholders, the formation of a partnership and a network, leading to the development of a logical model.

The final product of this step is a logical model that underpins the design of intervention activities. The logical model will also be the basis for future steps during the intervention's life cycle, and based on the intervention objective, behavioural and environmental change milestones will be identified to help achieve the goal.

This is followed by the intervention design phase, which involves verifying possible activities, analyzing and prioritizing the planned activities, and finalizing the design of the intervention itself.

The final product of this step is the intervention design, which uses an updated project logic model with the described activities. The description should detail how the intervention will bring about the desired change.

The intervention's content should be clear since it forms the basis of the action plan to implement it in the next step, which is developing a plan.

These first three steps lead to the development of a plan, which, starting from the assessment of available resources and capabilities, generates the creation of an action plan and the design of a monitoring and evaluation system.

An action plan and a monitoring and evaluation system that serve as a guide for implementing and realizing the intervention as well as indicating how such intervention should be monitored and subsequently evaluated, with careful consideration of available resources and capabilities, i.e., budgets, timescales, and skills to implement the intervention.

This last element is important and fundamental to enable the implementation and monitoring strategies that allow the intervention to be implemented, through interaction with stakeholders to improve implementation by ensuring constant adjustments and communications between the parties.

Therefore, it is an intervention implemented according to the plan and monitored, evaluated, and adapted during the operation, involving stakeholders.

The intervention or pilot project should be tested and refined if the goal is its scalability.

Following and completing the evaluation and sustainability phase, with an evaluation process, informative, sharing, and discussion of the conclusions to decide to support, scale, or stop the project itself.

An evaluation was made to document the observations on the intervention and the report to be provided to relevant stakeholders to arrive at the drafting of a plan that allows the Health City Manager to coordinate integrated paths on urban health.

Final consideration

The experience of training courses for Health City Managers, dedicated to those under 35, and of communities of practice within the mentioned urban contexts, demonstrate how the Health City Management Framework can represent a concrete, innovative, and modern response to the challenges posed by Urban Health, accompanying decision-makers and citizens on a journey of awareness, participation, and improvement of quality of life in urban settings globally.

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