CONCORDIA

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Transforming Urban Cardiovascular Health: A Framework for Data-Driven, Community-Centered Innovation

About the Novartis Foundation

The Novartis Foundation is a non-profit organization based in Switzerland. For over 40 years, we have helped improve the health of low-income populations, initially supporting disease elimination in areas such as leprosy and malaria. Today, we help cities tackle the burning health issues of our time, cardiovascular disease and health inequity. Cardiovascular diseases are the leading cause of death globally and take almost 18 million lives each year. We take a population health approach, which means widening the lens from a narrow focus on healthcare delivery to a panoramic vision of improving health in the population at large, ensuring access to healthy lives for all. Our population health approach brings together disconnected data to create insights that help authorities understand the root drivers of unequal health outcomes and find the best ways and best partners to remediate those. This empowers governments to re-engineer reactive care systems into proactive, predictive and preventive health systems that keep people healthy.

About CARDIO4Cities

CARDIO4Cities is a cardiovascular population health approach that was built and validated in three cities across continents. The CARDIO4Cities approach applies a simple comprehensive strategy to improve CV health, based on six pillars: C = improve quality of CARE, A = early ACCESS to diagnosis and care, R = REFORM policies with proven benefit, D = leverage DATA & DIGITAL technology, I = INTERSECTORAL collaboration, and O = ensure local OWNERSHIP.

After just 1-2 years of implementation in the cities of São Paulo (Brazil), Dakar (Senegal) and Ulaanbaatar (Mongolia), the CARDIO4Cities approach dramatically improved hypertension control rates at population level, the prime risk factor for cardiovascular disease, and showed positive effects on stroke and coronary heart disease rates. The CARDIO4Cities Accelerator is now supporting other cities to do the same and to improve the heart health of 150 million people in 30 cities, within three years.

About AI4HEALTHYCITIES

AI4HealthyCities was created by the Novartis Foundation with the goal to challenge the current reality, where people living in neighboring zip codes can experience 10+ year differences in life expectancy. By applying advanced analytics and AI to combined data from health and health-influencing sectors, the initiative aims to provide insights about the drivers of cardiovascular health and equity. This will ultimately allow for more precise intervention planning and resource allocation, so that decision-makers ensure their actions and policies can have the greatest impact on the largest number of people. Only by understanding which determinants are associated with health outcomes in different populations, can we narrow health inequities.

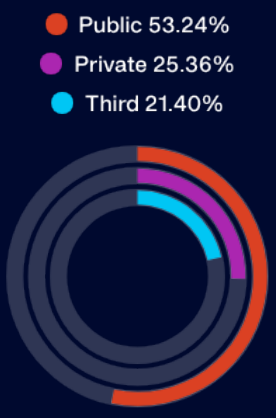
AI4HealthyCities has been running in New York City, Singapore, Helsinki and Basel. Each city examines the association between different determinants, such as income, education, digital access, structural racism, housing, environment and climate, mobility, or nutrition, and cardiovascular health.

About Concordia

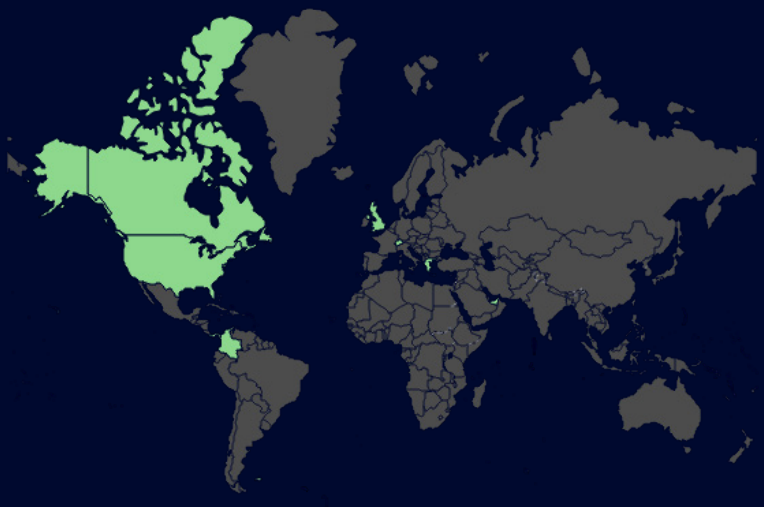
Concordia is the premier global forum focused on the most pressing issues facing the international community. Concordia's network and platform serve as critical tools to advance the work of individuals and organizations from the public and private sectors, maintaining a strong track record of forging innovative cross-sector partnerships and action-oriented solutions. From our flagship Annual Summit in New York—the largest nonpartisan gathering alongside the UN General Assembly—to our targeted Horizon summits, Concordia's events expand our communities' dialogues globally. Through our Convene-Connect-Create model of member engagement, Concordia fosters a diverse community composed of heads of state, government officials, C-suite executives, and NGO leaders.

Total attendees: 3,700+

Total live stream viewers: 37,000+



Attendees by Sector



Countries with the most prominence among attendees

Executive Summary

On September 24th, 2025, the Novartis Foundation and Concordia co-hosted a roundtable focused on urban heart health to discuss how AI-enabled community-driven approaches and strategic partnerships lead to scalable solutions. Taking place alongside the UNGA and 15th Concordia Annual Summit, the session brought together diverse stakeholders, governments, civil society, academia, and the private sector, to forge a shared commitment to healthier urban hearts; exploring how inclusive, community-driven approaches and intersectoral partnerships can integrate healthcare, social, behavioral, and environmental factors into scalable solutions. Participants discussed how data and local engagement can drive early detection, targeted interventions, and lasting impact. The roundtable emphasized co-ownership, shared accountability, and actionable insights to accelerate progress across cities.

Stakeholders included:

American College of Cardiology
American Heart Association
Arnhold Institute for Global Health
Baraka Impact Finance
Bayer
CGA
Crowell Global Advisors
Gates Foundation
Milken Institute
Movement Health
New York University School of Global Public Health
Novartis Foundation
Novartis International AG
Novo Nordisk A/S
Novo Nordisk Foundation
Philips Foundation
Primary Care Development Corporation
Pro Mujer
Siemens Healthineers
TikTok
TIME
University College London
Weill Cornell Medicine
Wipro Technologies
WK Kellogg Foundation
World Economic Forum
World Heart Federation

Introduction and Background

Urban environments are increasingly central to global health outcomes. They concentrate populations, infrastructure, and services, but also amplify disparities. Life expectancy can vary by more than a decade between neighborhoods in the same city, driven not by genetics or access to hospitals alone, but by factors such as poverty, housing conditions, education, transportation, and social isolation. These disparities are not only unjust but also put an economic burden on health systems. The cost of CVD, including direct healthcare expenditures and lost productivity, is estimated to exceed $1 trillion annually in the United States[i] alone.

Cardiovascular disease (CVD) is the leading burden of disease globally, responsible for over 20 million deaths annually in 2022[ii] and costing economies billions in lost productivity and healthcare expenditures.[iii]

As urbanization accelerates, with 70% of the global population projected to live in cities by 2050,[iv] cities are uniquely positioned to become engines of health innovation. This white paper proposes a globally adaptable policy framework for reducing urban cardiovascular disability and mortality through AI-informed and equity-driven interventions. Drawing on pioneering programs[v, vi, vii] in São Paulo, Dakar, and Ulaanbaatar, as well as ongoing programs in New York City[viii] and Helsinki, the paper outlines scalable strategies for integrating data and technology with scientific innovations, empowering communities, and aligning multi-sectoral partnerships.

As urbanization accelerates, cities are becoming both epicenters of health disparities[ix] and strategic arenas for policy-driven innovation. The Novartis Foundation's CARDIO4Cities[x] and AI4HealthyCities initiatives offer a transformative model for addressing cardiovascular health in (large) urban populations. These programs integrate predictive analytics, strengthening quality of care, multi-sectoral partnerships, and community engagement to identify and mitigate the root drivers of cardiovascular risk. Pioneered in cities such as New York, Singapore, Helsinki, São Paulo, Dakar, and Ulaanbaatar, the initiatives demonstrate that cities can reimagine their health systems as proactive, as opposed to reactive care systems.

Case Studies and Best Practices

The programs in New York City, Helsinki and São Paulo offer valuable lessons for global adaptation. In New York, AI4HealthyCities analyzed millions of data points to identify neighborhood-level risk factors. Commute time, social isolation, and lack of access to healthy food were identified as key drivers of cardiovascular risk.

In Helsinki, the city embedded health impact assessments into all municipal decisions, from transportation to education. Preliminary results showed that physical activity increased lifespan by up to eight years, even among populations without metabolic risk factors. The city is now developing a comprehensive welfare plan that includes all departments, not just health and social services, demonstrating the power of cross-sectoral governance.

In São Paulo, Dakar, and Ulaanbaatar, the CARDIO4Cities model was adapted to local contexts with strong results.[xi, xii, xiii] Locally led interventions improved hypertension detection and control, while partnerships with informal community organizations-built trust and sustained engagement. These cities demonstrated that data-driven approaches can be effective even in resource-constrained environments, provided they are culturally and contextually adapted.

Methodology

This white paper is based on the roundtable discussions and panel held by the Novartis Foundation at the 2025 Concordia Annual Summit, alongside insights discovered through the AI4HealthyCities initiative. AI-driven analytics were applied to identify determinants of cardiovascular risk and disease at the neighborhood level, drawing on data from electronic health records, census and socioeconomic indicators, environmental metrics, and community surveys. These data-informed insights were complemented by

qualitative input gathered through community assessments, offering a targeted, culturally-relevant roadmap of precise and sustainable interventions to improve cardiovascular health.

Key Discussions

The CARDIO4Cities and AI4HealthyCities initiatives have generated a robust set of findings that underscore the importance of addressing social determinants of health in urban cardiovascular care. In New York City, commute time[xiv] emerged as one of the strongest predictors of hypertension, surpassing traditional clinical risk factors. Other key drivers include low education, low income, and social isolation, factors that are often invisible in clinical settings but have profound impacts on health outcomes.

AI-enabled models demonstrated the power of precision targeting. In Helsinki, integrated data revealed unexpected risk clusters, such as middle-aged men with high income and education experiencing sudden strokes. These insights allowed for tailored interventions that addressed both clinical and non-clinical risk factors. Predictive tools also enabled cities to simulate the outcomes of different policy choices, helping decision-makers allocate resources more effectively.

Community trust emerged as a critical enabler of success. In Dakar and São Paulo[xv], programs that were co-created with local leaders and informal organizations achieved higher engagement and sustainability. Trust was built through culturally concordant care, listening tours, and partnerships with resident councils. During the breakup session, Medicaid's model of covering minor expenses was cited as an example of how incremental trust-building can lay the foundation for more complex care.

Another key discussion was the structural nature of time poverty. Long commutes, caregiving responsibilities, and fragmented services limit individuals' ability to engage in healthier lifestyles or preventive care, even among educated and economically stable populations. These barriers require systemic solutions that go beyond individual behavior change.

Policymaking Opportunities

To effectively address urban cardiovascular health, cities must adopt a proactive, data-driven, and community-centered approach to support traditional clinical models. Insights from AI4HealthyCities in cities like New York, Helsinki, and Singapore demonstrate that cardiovascular risk is often driven by non-clinical factors such as commute time, social isolation, low education, and lack of internet access. These findings underscore the need for integrated dashboards that combine health, transport, housing, education, and environmental data to enable predictive modeling allowing to implement targeted interventions. Helsinki's model, for example, embeds health impact assessments into every city's decision, from urban planning to education, ensuring that health is treated as a shared responsibility across sectors. Community trust is essential, and policies must support community insights, culturally concordant care, and the inclusion of community leaders in decision-making. Ethnographic research reveals that time poverty is a structural barrier affecting both low-income and highly educated populations, reinforcing the need for structural solutions rather than behavioral campaigns. AI-driven tools allow cities to simulate the health[xvi] and

cost impact of interventions before implementation, enabling smarter resource allocation[xvii] and intervention adaptation to local context. Ultimately, real-time data access and personalized risk assessments can transform urban health systems. Access to real-time data can also empower citizens to become "CEOs of their own health".

Recommendations

To scale and sustain the impact of these initiatives, coordinated action is needed across global institutions, national governments, city authorities, and private sector partners. In cities, with a population of over 1 million people, we recommend incorporation of the CARDIO4Cities initiative as a model for urban cardiovascular health. Cities should also integrate the data-driven insights from AI4HealthyCities into existing city programs and support.

We also recommend local and national governments investing in scalable AI tools and digital infrastructure for urban health. Public-private partnerships should be promoted to fund, co-develop, and implement interventions, and health equity should be positioned as a strategic priority for innovation and sustainability.

Ministries of health and city governments should adopt integrated data platforms to identify and address local risk factors. Health impact assessments should be embedded in urban planning and policy, and community-led programs should be funded and supported. Public-private partnerships and intersectoral partners can play a catalytic role by seed funding innovations within urban population health, and convening global coalitions to share best practices and coordinate efforts.

Implementation Framework

The proposed implementation framework follows a stepwise approach. First, cities should conduct vulnerability mapping and community-level meetings to understand local health needs, lived experiences, and related social priorities. Second, interventions should be co-created with local stakeholders and aligned with local, city initiatives and strategies. Third, progress should be monitored using shared dashboards and key performance indicators, with strategies adjusted based on real-time feedback.

Governance should be coordinated through a local steering committee consisting of intersectoral partners, chaired locally by city governments, and co-led by community organizations and private sector partners. Key Performance Indicators should include reductions in undiagnosed or uncontrolled hypertension and diabetes, reductions in acute CV events, increases in community engagement and trust metrics, improvements in life expectancy and quality-adjusted life years, and return on investment for CARDIO4Cities versus usual care. Additionally, cities should utilize locally proven key performance indicators to provide a tailored and adaptable approach.

Next Steps and Call to Action

To catalyze urban health action, we propose the formation of a coalition for Urban Heart Health, convened by local governments and communities with support from intersectoral partners. This coalition would create a shared dashboard for tracking urban heart health metrics, mobilize funding for scalable, community-centered interventions, and facilitate knowledge exchange through annual convenings and digital platforms via the **CARDIO4Cities Accelerator**.

Conclusion

Urban cardiovascular health is not just a medical issue, it is a social, economic, and environmental imperative. Cities have the tools, data, and partnerships to lead a global transformation in heart health. With coordinated action, scalable innovation, and community leadership, we can eliminate heart attacks in the next generation. The evidence is clear, the tools are available, and the partnerships are forming. What is needed now is bold leadership and sustained investment. The time to act is now.

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