The support of AI to decipher and address health equity

No data, no equity

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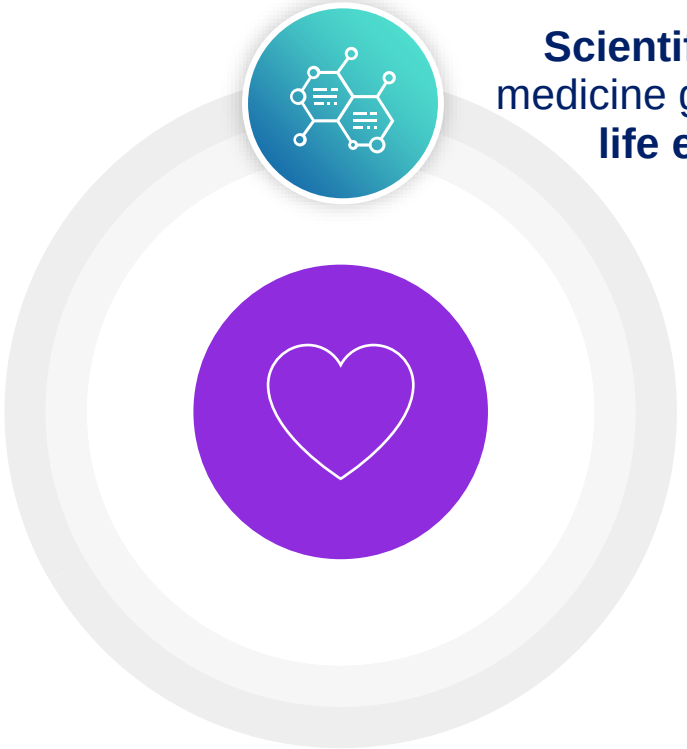
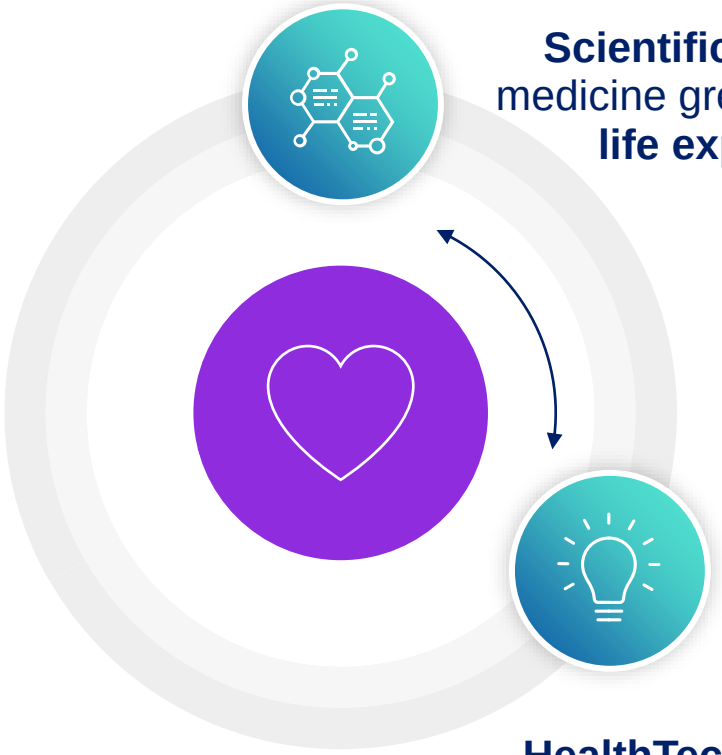
The triangle of innovation



Scientific progress in medicine greatly **extended life expectancy**

The triangle of innovation



Scientific progress in medicine greatly **extended life expectancy**

HealthTech innovations changed the way we **deliver health and care**

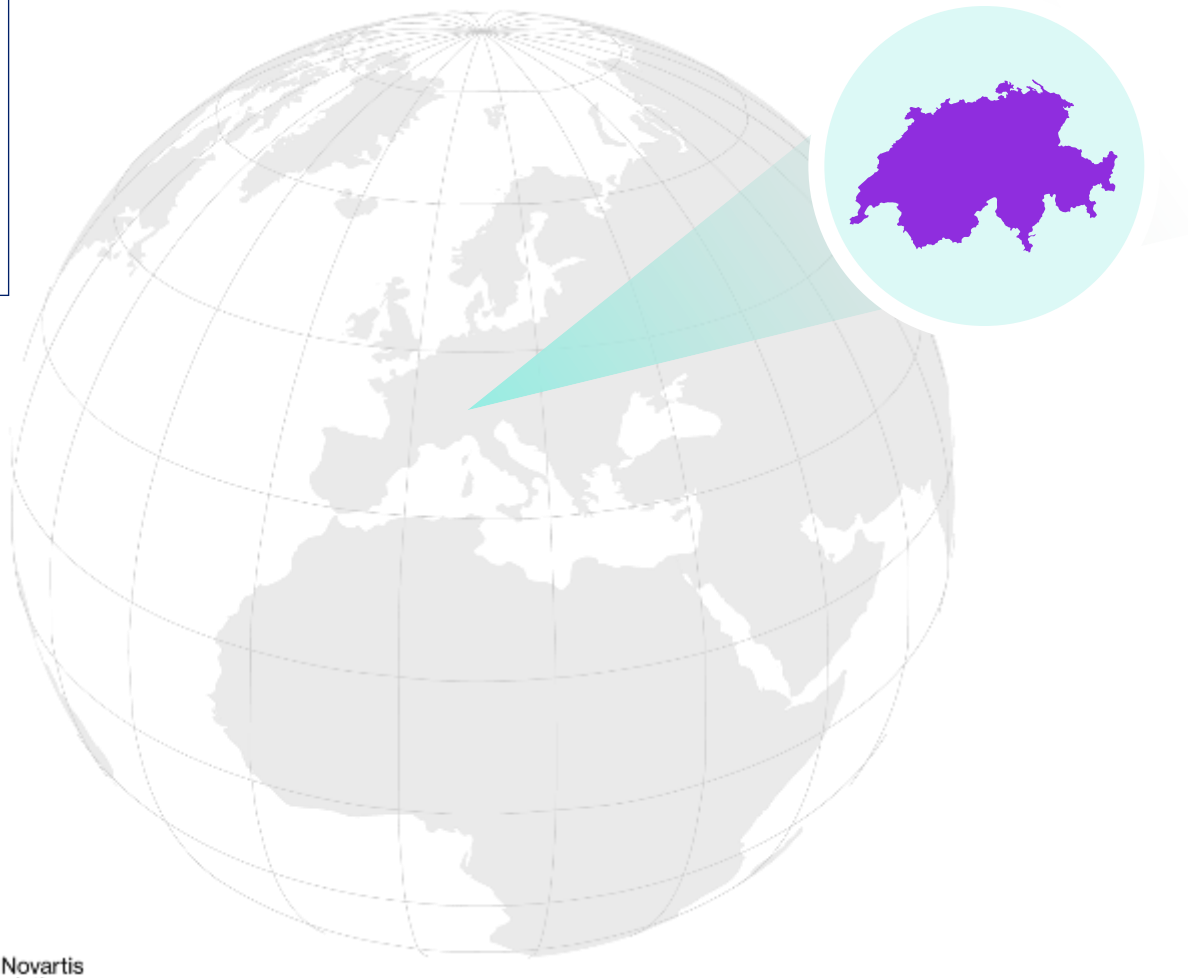
Cardiovascular disease

The leading cause of death and disability globally

Globally

1 out of 3

deaths



in 2021*

133’000 people

hospitalized with CVD

and almost

20’000 deaths

Direct and indirect costs

27.8 billion

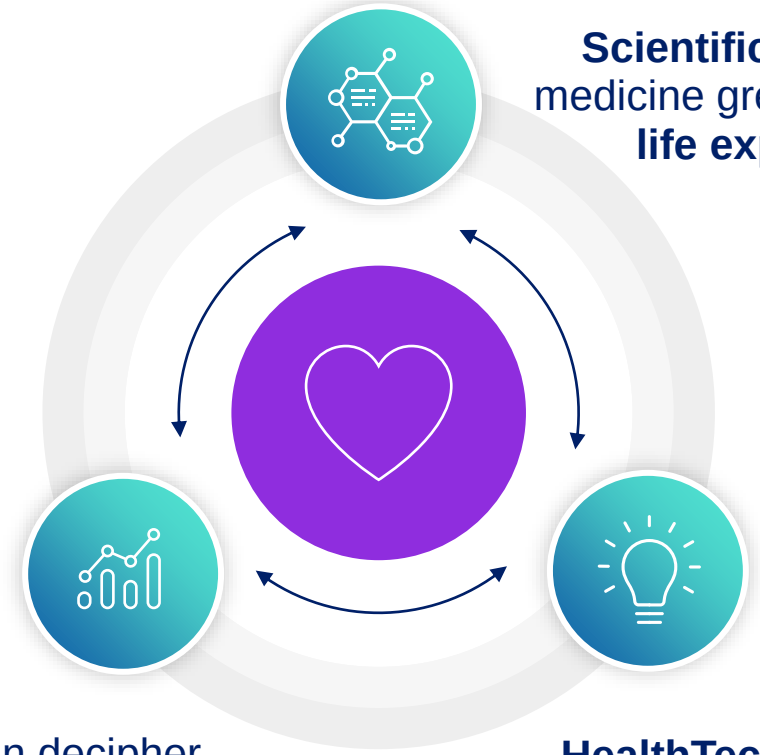
Swiss Francs

Socioeconomic costs

4% of GDP

*PRAXIS 2024; 113 (03): 57–66

We need to understand what truly drives health



Scientific progress in medicine greatly **extended life expectancy**

Data & AI can decipher what drives **population health and inequity**

HealthTech innovations changed the way we **deliver health and care**

80%
20%

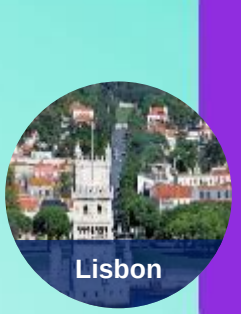
AI4HealthyCities

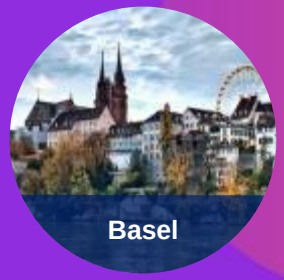
Deciphering underlying drivers

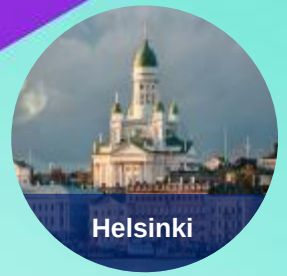
Cardiovascular health & **Health inequities**

Translation into **action and policy**

Improve the heart health of at-risk **populations at large**







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AI4HealthyCities requires strong public private partnerships – the example of NYC

Pool resources and expertise to generate data driven insights that can redesign population health roadmaps with an equity lens

Co-design precision population health roadmaps that catalyze the paradigm shift from *healthcare* to *health*

Weill Cornell Medicine

NYU SCHOOL OF GLOBAL PUBLIC HEALTH

Microsoft

Pooling and analysing **data from health and health influencing sectors** to identify most impactful social determinants of health

NYC Health

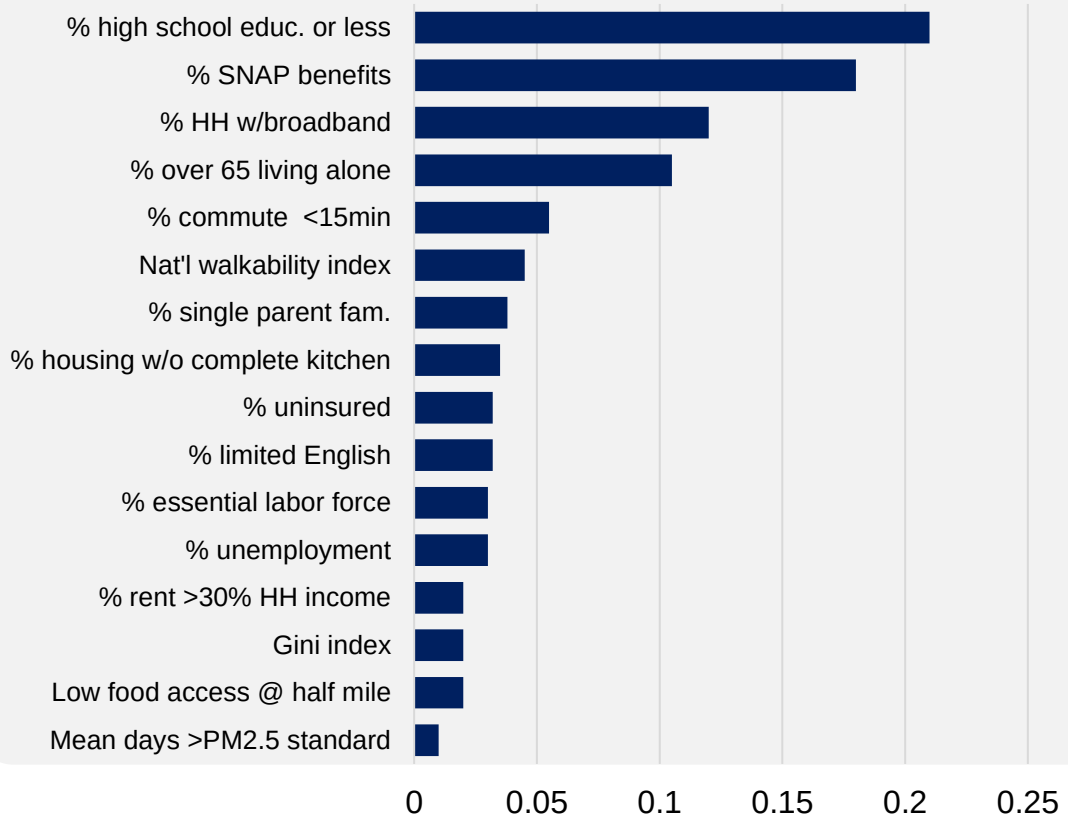
Commit to **translating data insights into action** for improving heart health of large populations and reduce inequities

AI4HealthyCities – the example of NYC

Understanding the social, environmental and behavioral drivers of CV health and inequity

AI4HealthyCities

Insights for diabetes



Darren Tanner, Yongkang Zhang, Ji Eun Chang, Peter Speyer, Elizabeth Adamson, Ann Aerts, Juan M. Lavista Ferres, William B. Weeks. Machine learning to evaluate the relationship between social determinants and diabetes prevalence in New York City. BMJ Public Health 2024;2:e001394. doi:10.1136/ bmjph-2024-001394.

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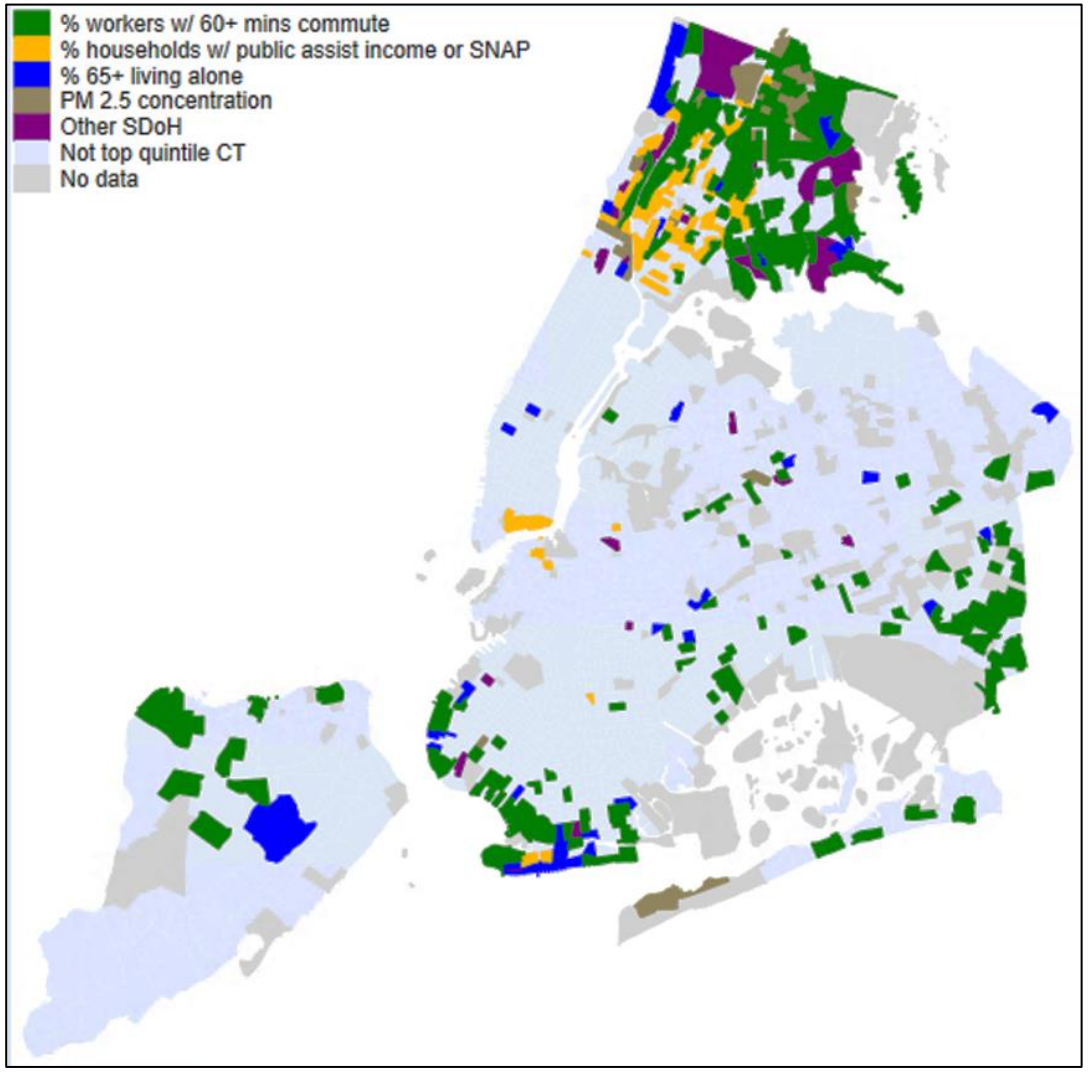
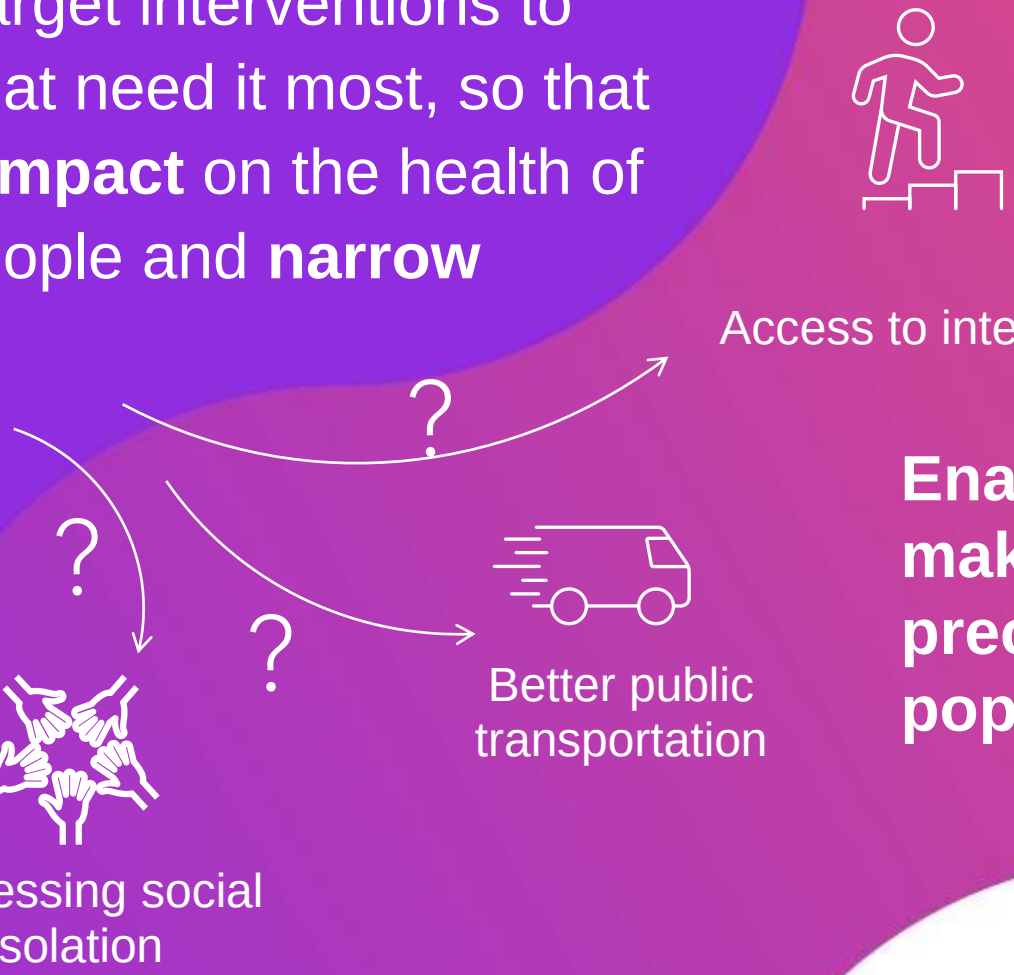
AI4HealthyCities – the example of NYC



Map illustrates **hot spots for hypertension** along with its key drivers

=> we can use **multiple leading determinants** for each census tract **to design and target interventions to at-risk populations,** reducing CVD outcomes and inequity

Data insights can help target interventions to those areas or groups that need it most, so that they have the **greatest impact** on the health of the largest number of people and **narrow health inequities**



Enable decision makers to apply precision population health

Precision population health can help advance transformation from healthcare to health

Current health systems are **reactive care systems**, waiting for people to get sick

Need to transform into **proactive, predictive,** and ultimately **preventive health systems** that keep people healthy

Continuous adaptation

Seize the opportunity of living in a data- and tech-driven era to transform *healthcare to health*

Generalize data-driven decision making for **continuously improving health planning and resource allocation**

Use the power of data and AI to enable **precision population health & narrow health inequities**

Particularly in Switzerland, one of the most innovative countries in the world!

No Data
No Equity

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Thank you!

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