

Hypertension in African migrants: Lessons learnt from the RODAM study

Prof.dr. Charles Agyemang

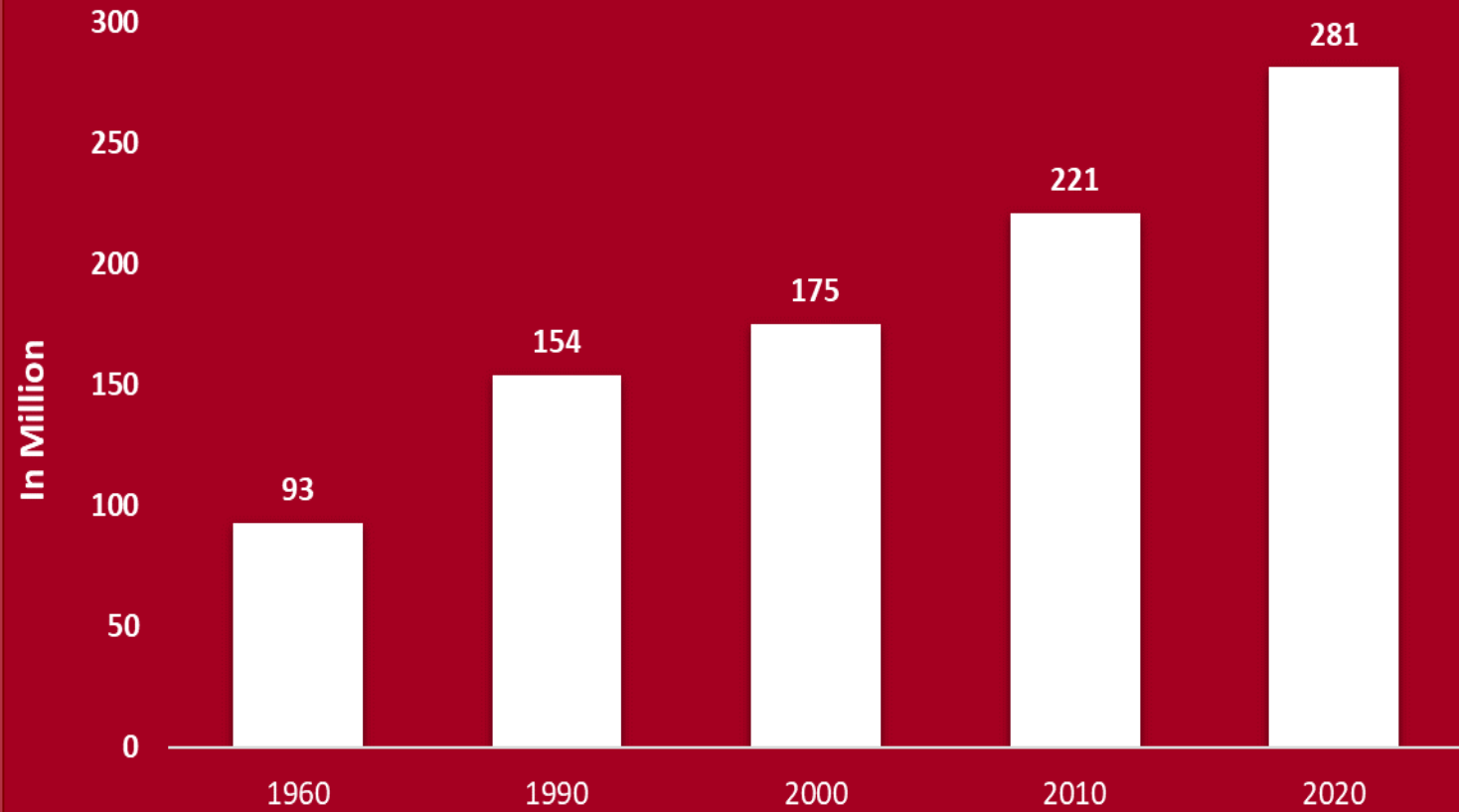
Professor of Global Migration, Ethnicity & Health

Vice President, European Public Health Association, Migrant Health Section



Migration pattern

Number of people living outside their country of birth



Source: United Nations Population Division





International remittance flows to LMICs (1990-2020)

Migration comes with many advantages & Challenged:

- Better living standard & wellbeing
- socioeconomic development - destination countries
- Remittances



International remittances^(d)

USD **702** billion —   Down from USD **719** billion in 2019

in international remittances globally in 2020. Although international remittances declined due to COVID-19, the actual decline (2.4%) was much less than initially projected (20%)

Low- and middle-income countries^(d)

USD **540** billion in international remittances was received by low- and middle-income countries in 2020

 Down from USD **548** billion in 2019



Migration also has several challenges



Migrant boats capsized

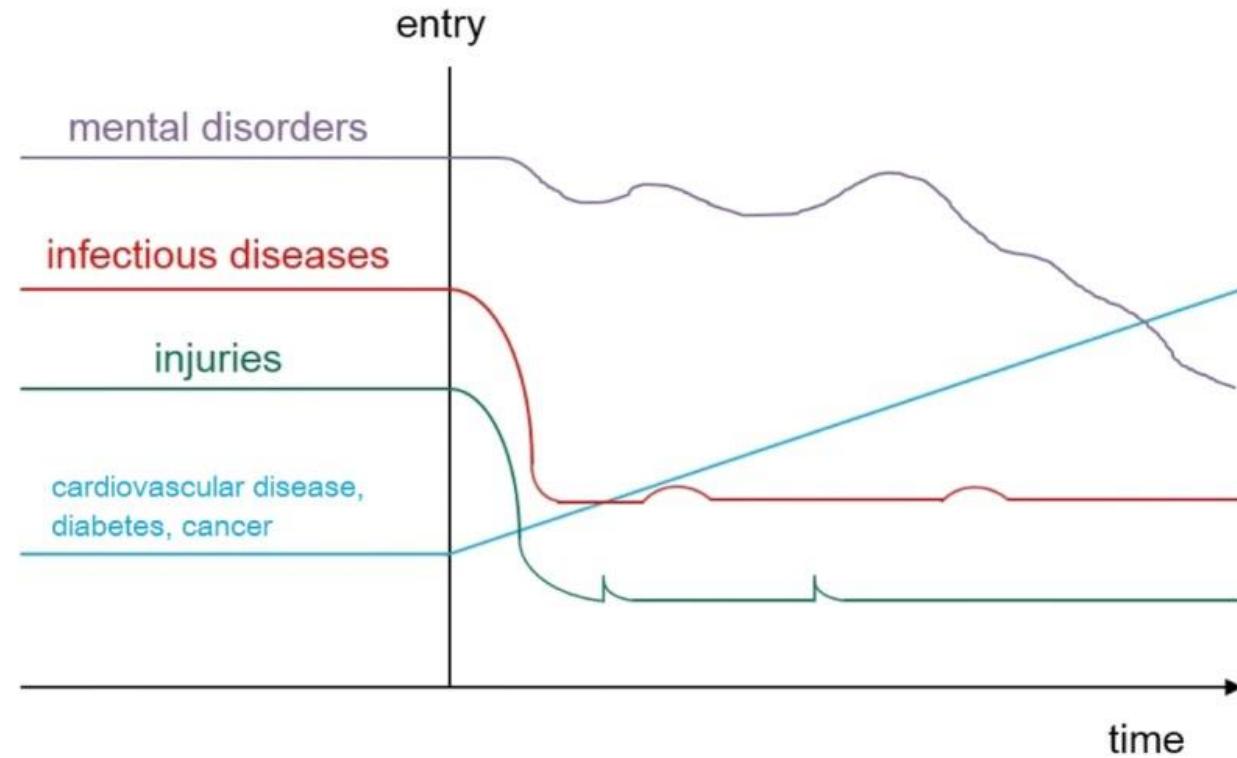


Maintaining healthy life upon migration remains a major challenge and tough nut to crack





Cardiovascular diseases are major burden in migrants and rapidly increase upon settlement in the host countries



Time course: hypothetical scheme of different disease entities among migrants.

Source: Alexander Krämer



Summary of ethnic inequalities in CVD burden in migrants in Europe



International Society of Travel Medicine
Promoting healthy travel worldwide
Established 1991

Journal of Travel Medicine, 2018, 1–9
doi: 10.1093/jtm/tay107
Review

Review

Non-communicable diseases in migrants: an expert review

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- ❖ *CVD risk differs by country of origin, country of destination and duration of residence*
- ❖ *Stroke is more common in SSA migrants & CHD is more common in South-Asians*
- ❖ *North Africans have a lower risk of stroke and CHD, but this advantage is waning*
- ❖ *Chinese have lower risk of overall stroke, but higher risk of intracerebral hemorrhage*



Hypertension - single most important modifiable risk factor

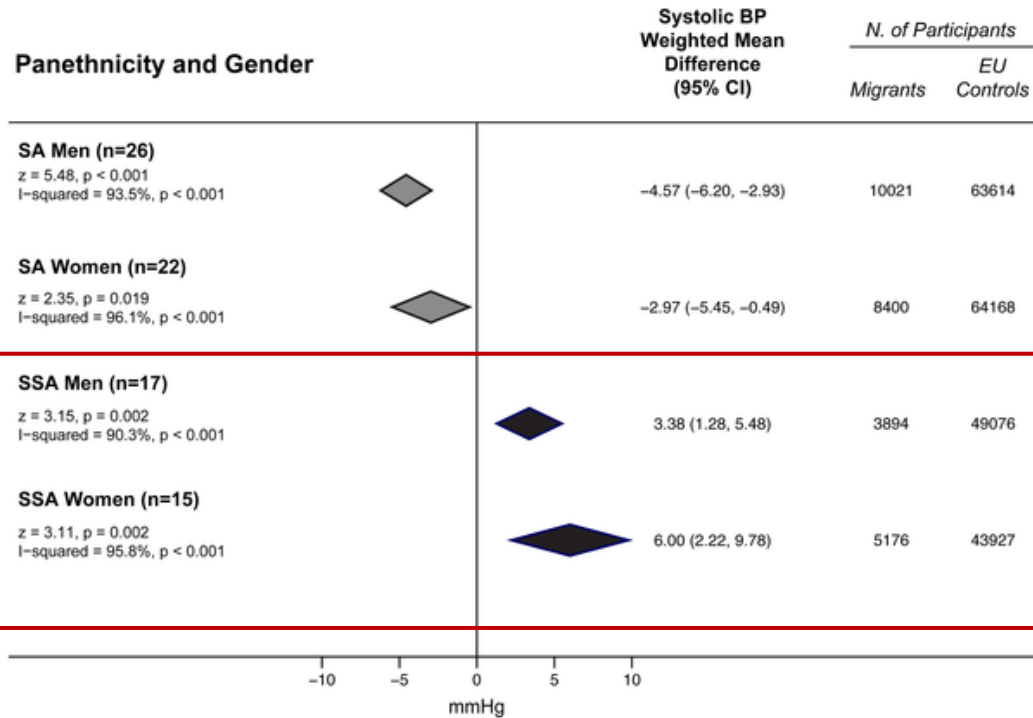


African minorities most affected

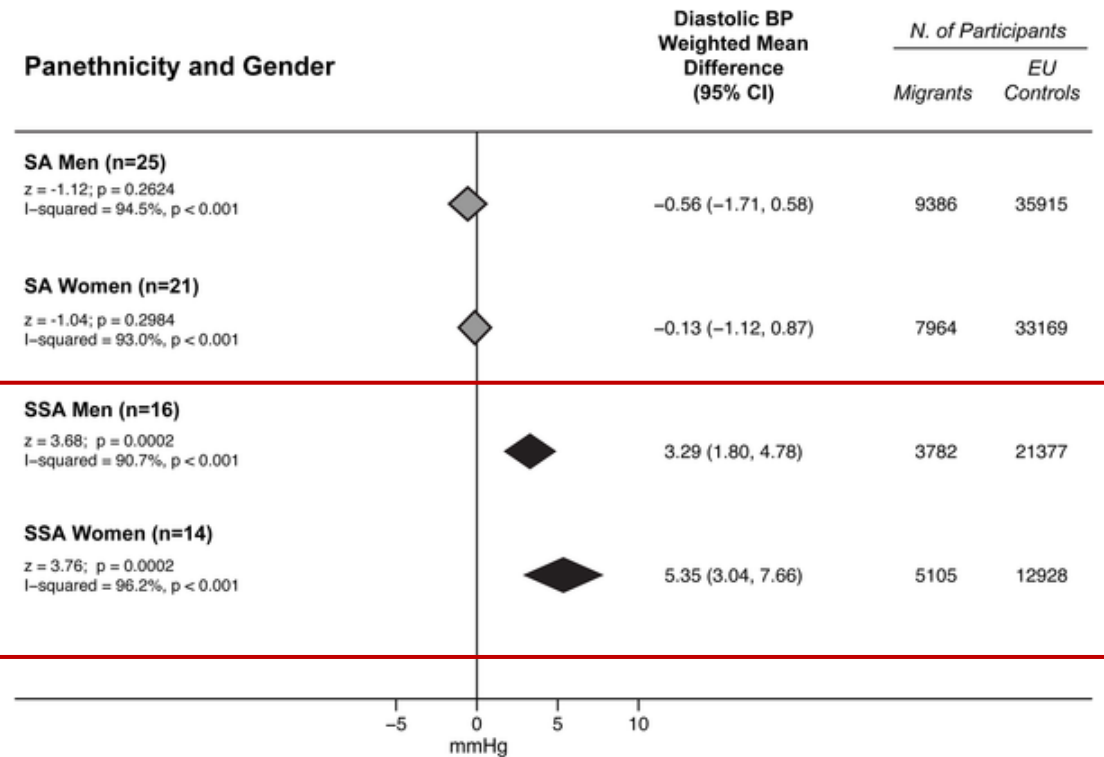
- *2-4 times higher than Europeans*



Panethnicity and Gender



Panethnicity and Gender

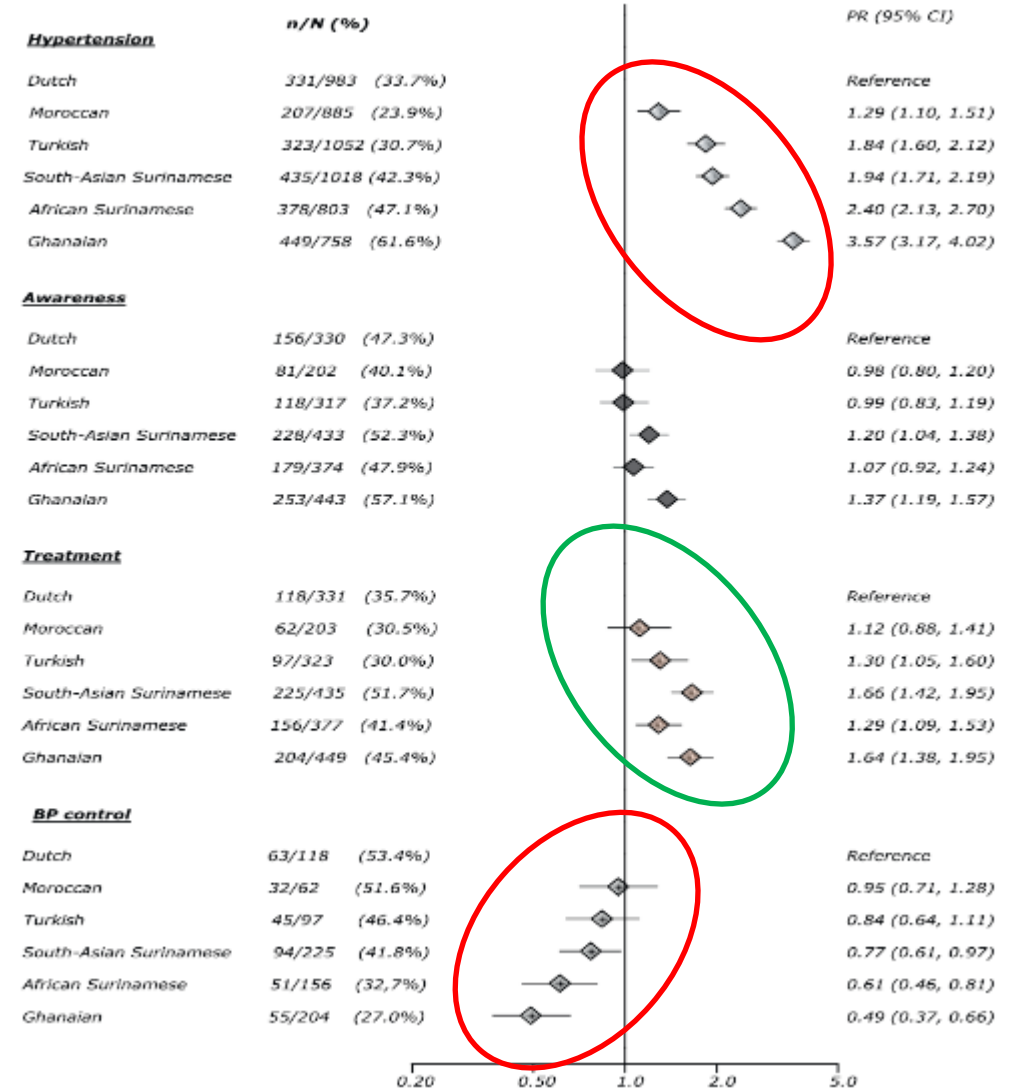


SBP & DBP differences between minority groups and EU participants by panethnicity and gender



Prevalence ratios of hypertension, awareness, treatment, and control ethnic group in men

A) Prevalence ratios of hypertension, awareness, treatment, and control ethnic group in men



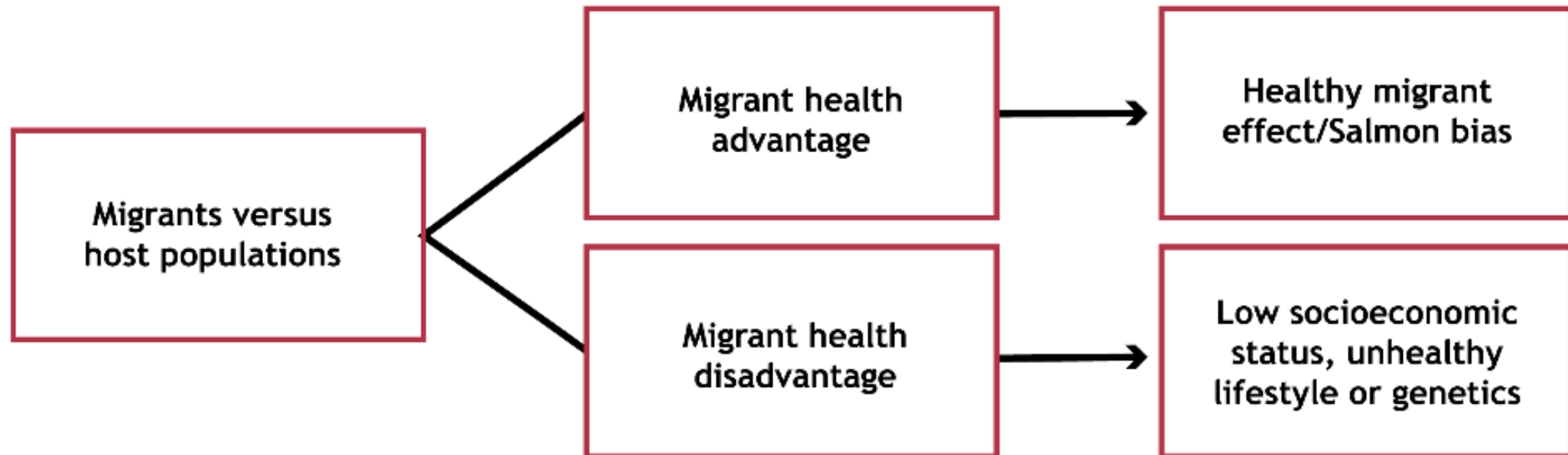


Major challenges is how do we explain the high burden of hypertension risk in African migrants?

- ❖ Explanations are difficult
- ❖ Main known risk factors do not explain the ethnic differences
- ❖ Mainly due to lack of appropriate data e.g. longitudinal studies
- ❖ Unintended consequence: Comfy zone hypothesis



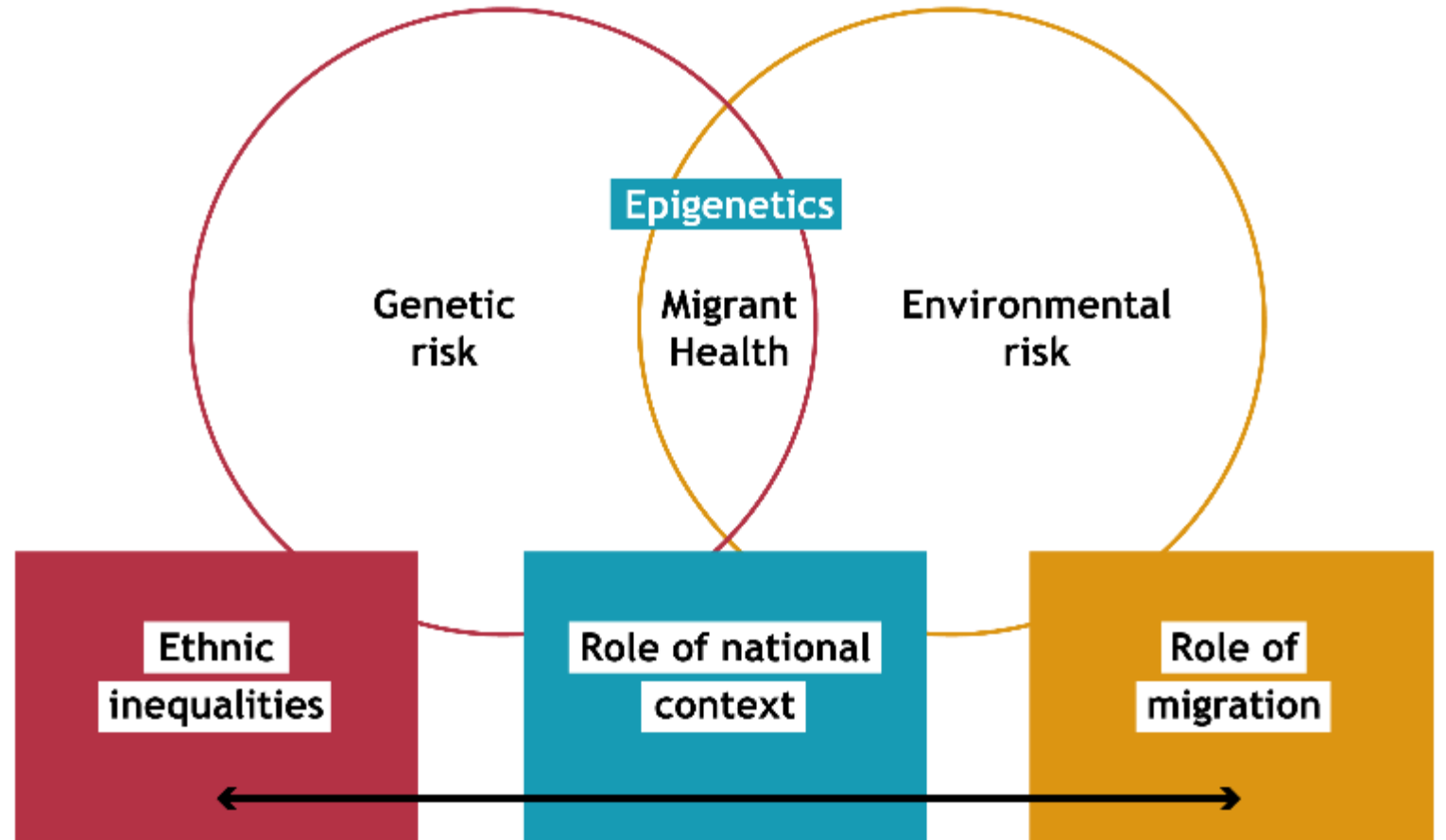
Comfy Zone Explanatory Model





Moving out of our Comfy zone:

Model of broadening the scope & to identify determinants



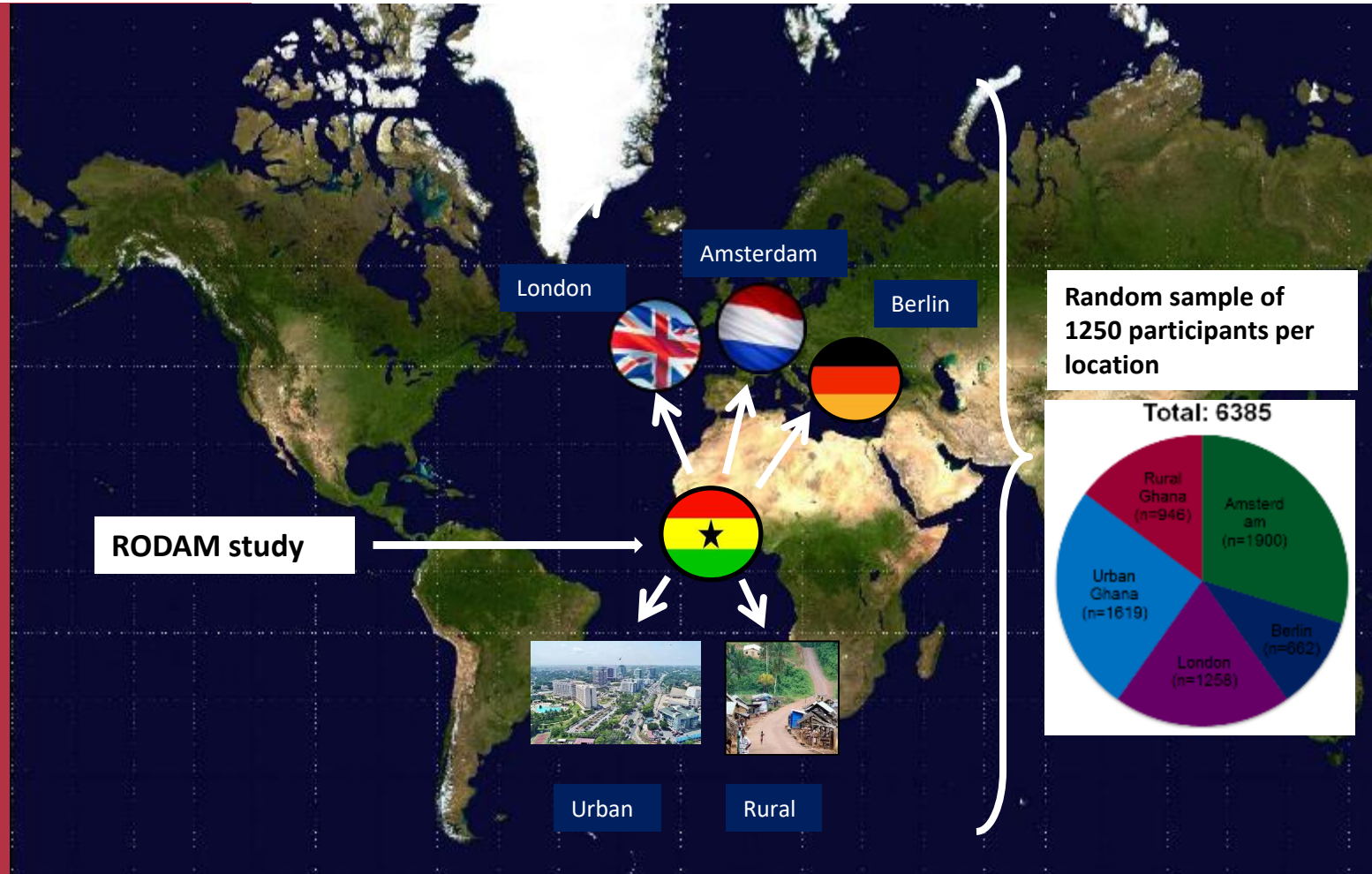


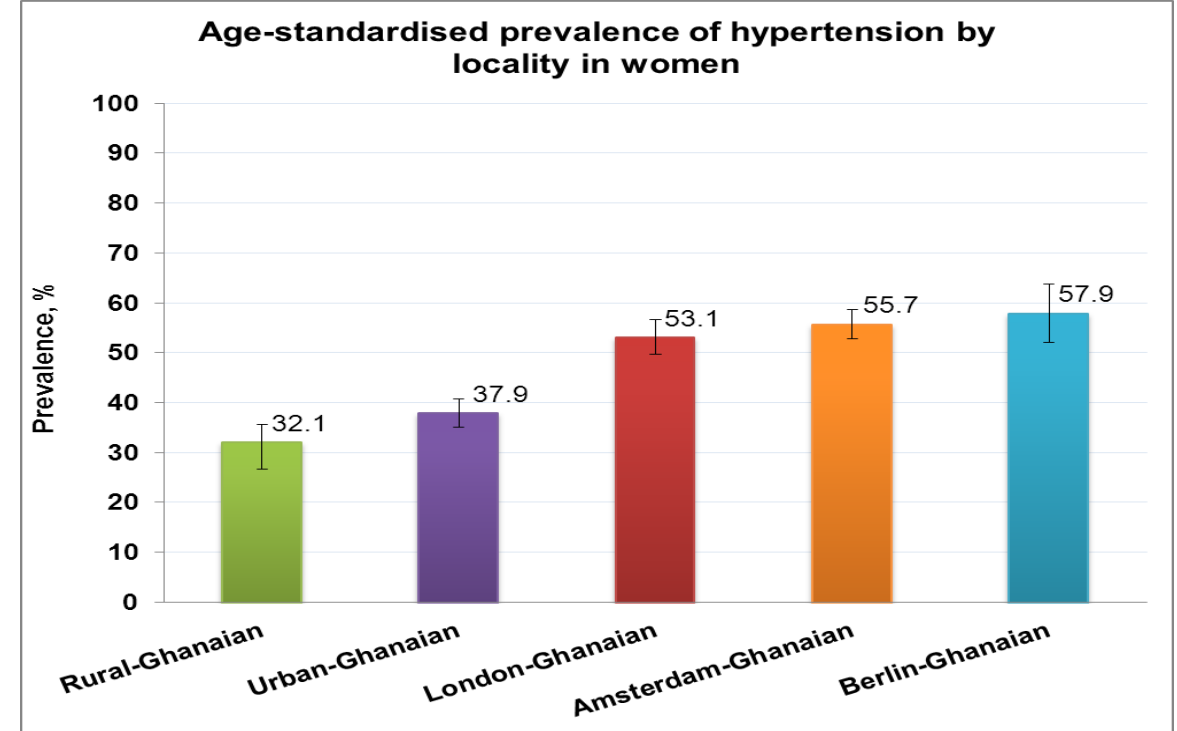
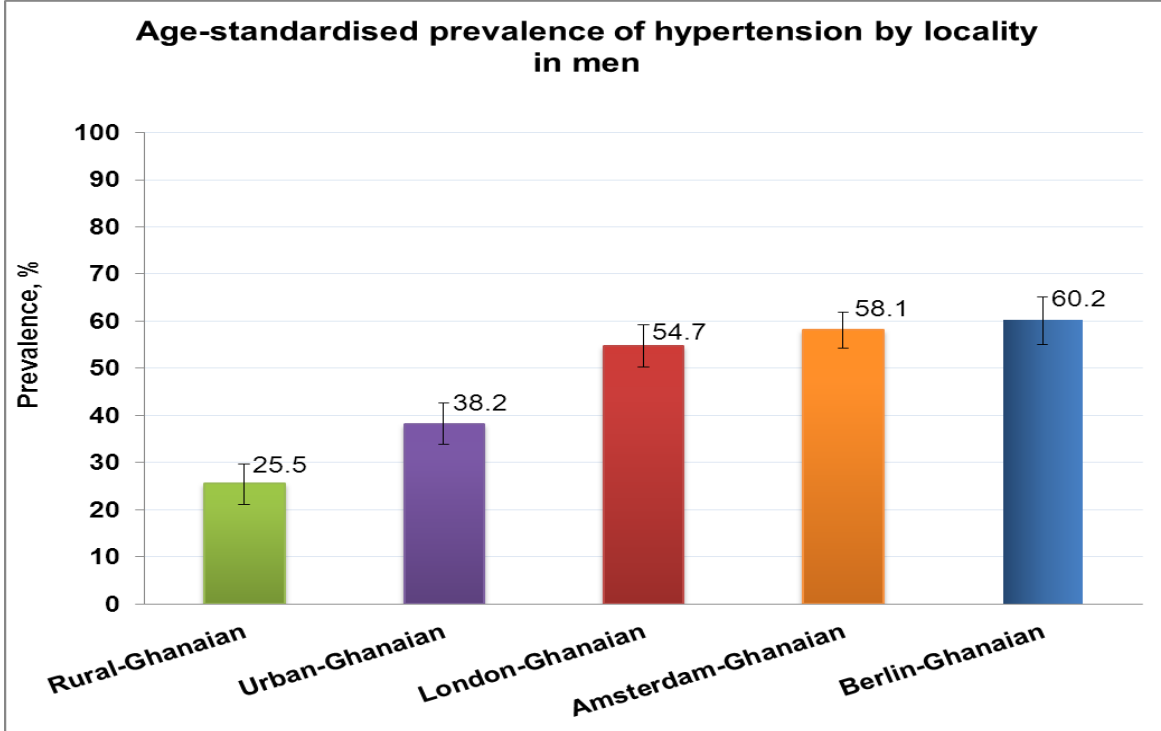
Research on Obesity & Diabetes among African Migrants (RODAM study)
For more info on the RODAM study please see:
<http://www.rod-am.eu/home>



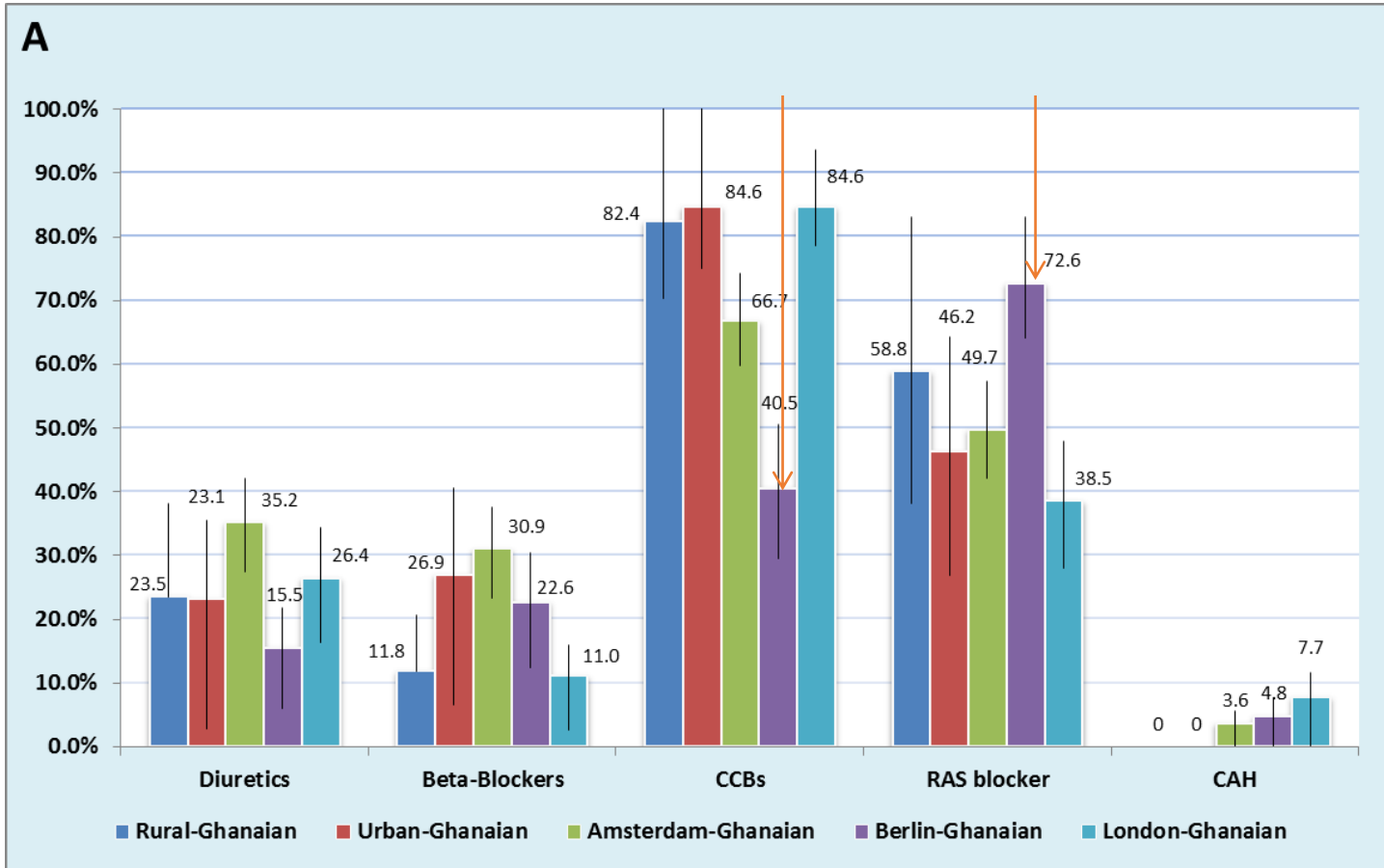


Development of a unique migrant and non-migrant cohort





Hypertension prevalence among African migrants in different European countries & rural and urban Africa



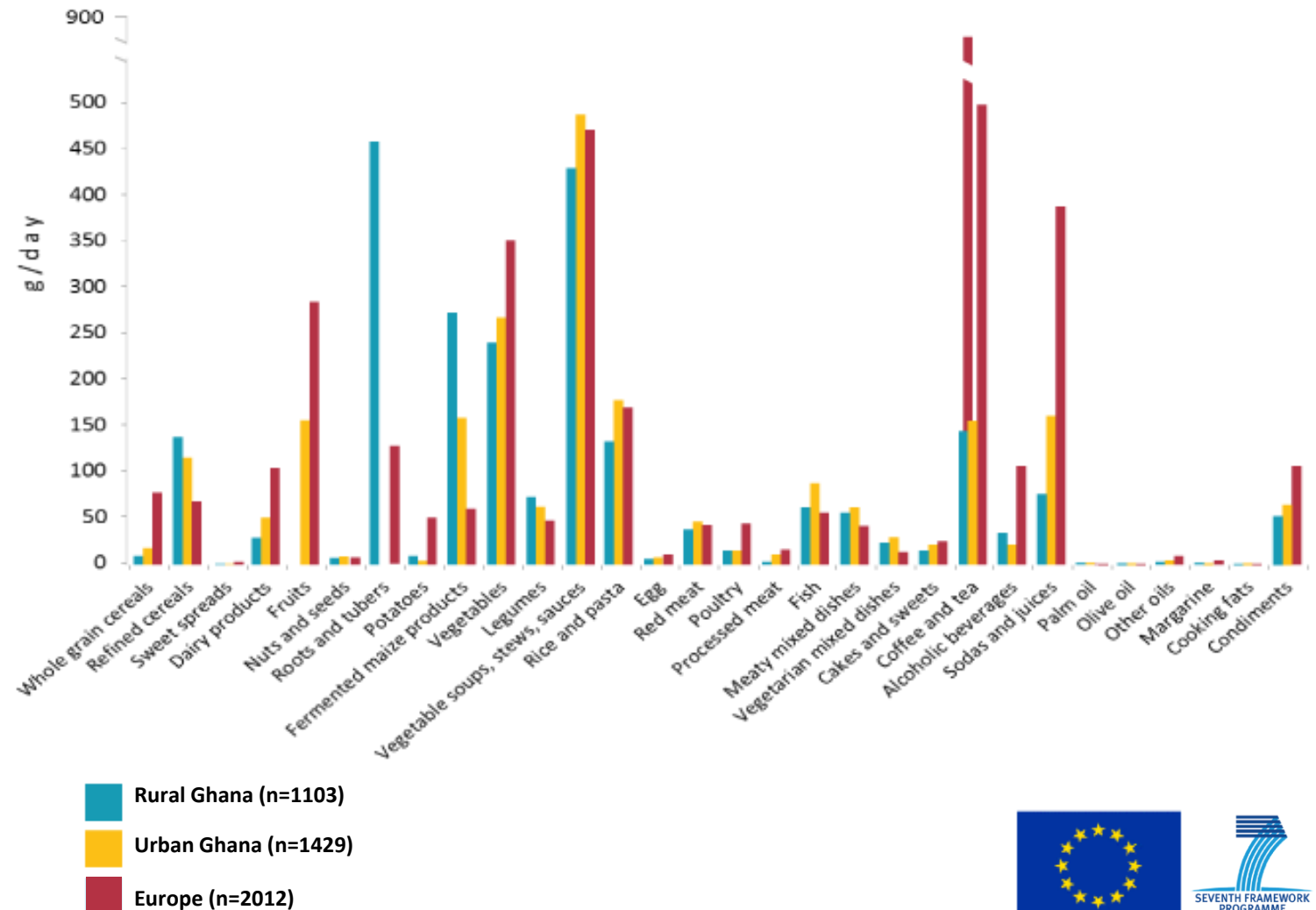
Anti-hypertensive prescription practices across sites

The RODAM study

Agyemang et al. J Hypertens. 2018 Jan;36(1):169-177.



Mean intakes (g/day) of 30 food groups by site – RODAM study





The New York Times

HEALTH

LOSE WEIGHT NATURALLY IN 9
DAYS WITH NO SIDE EFFECTS
0578798268

Tel:
0208 181471
0240 953763
Location:
Market Street Town Market

TAILOR
FOR
EMPLOYERS

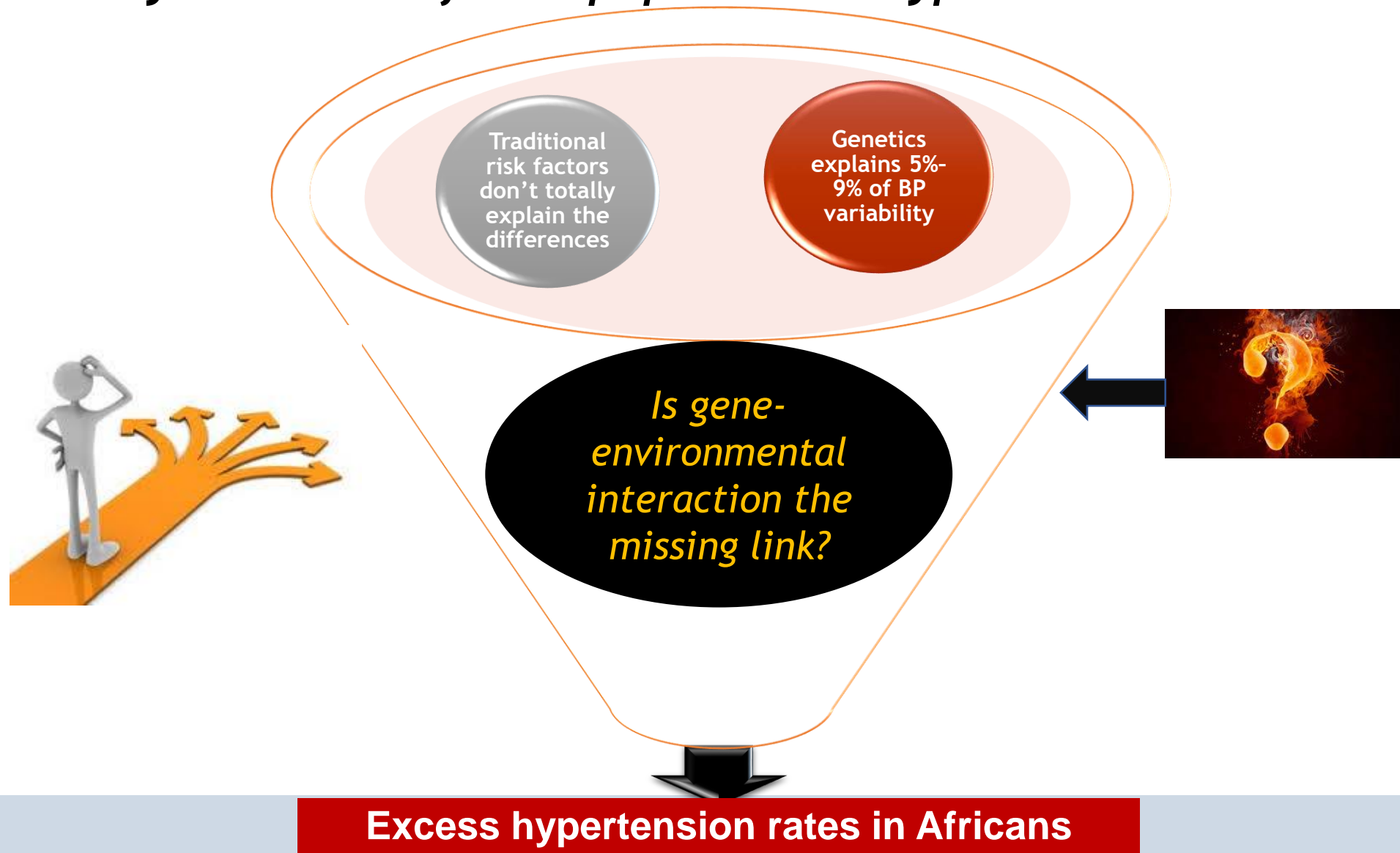


Obesity Was Rising as Ghana Embraced Fast Food. Then Came KFC.

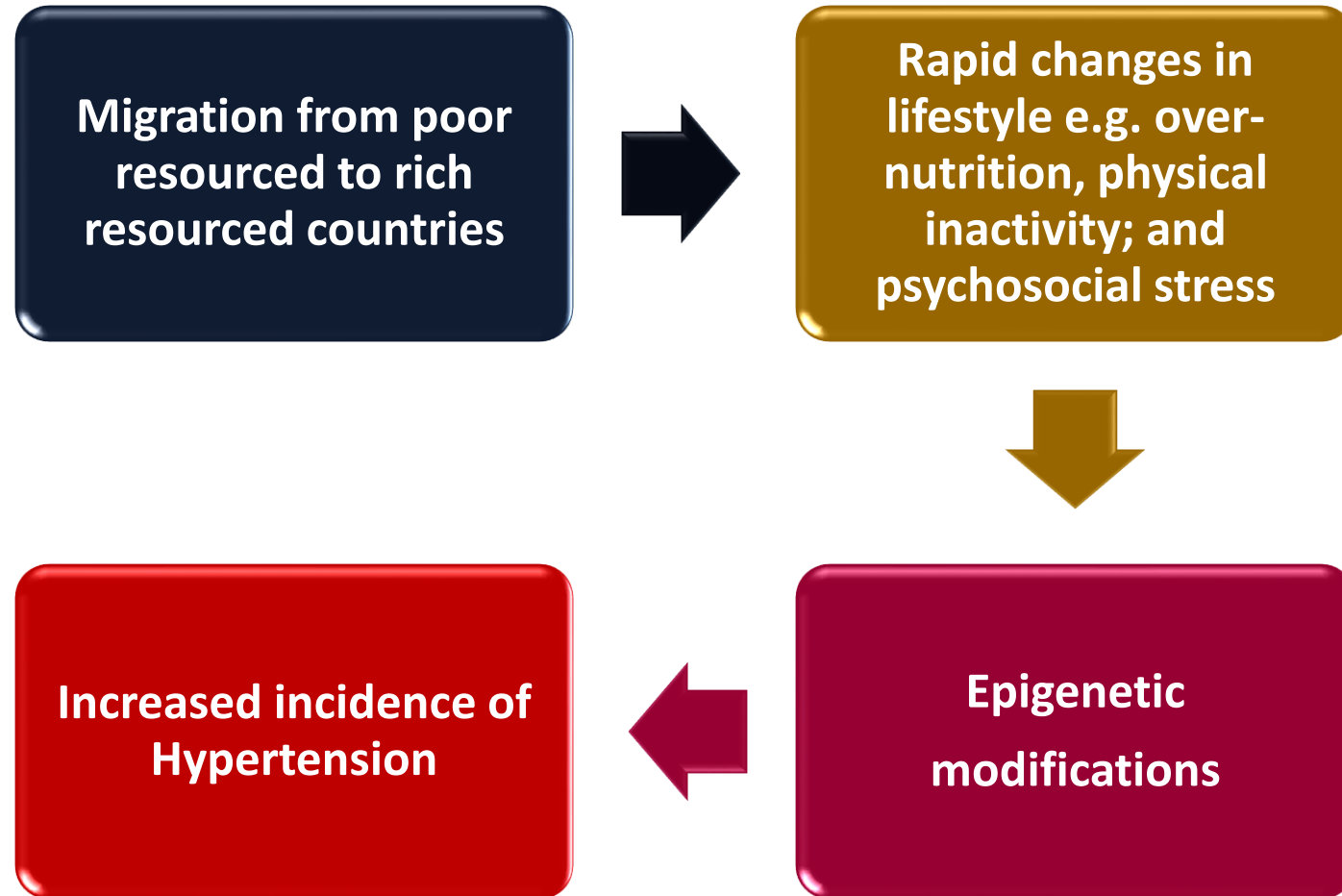
The growing popularity of fried chicken and pizza in parts of Africa underscores how fast food is changing habits and expanding waistlines.



What exactly is behind African populations' hypertension burden?

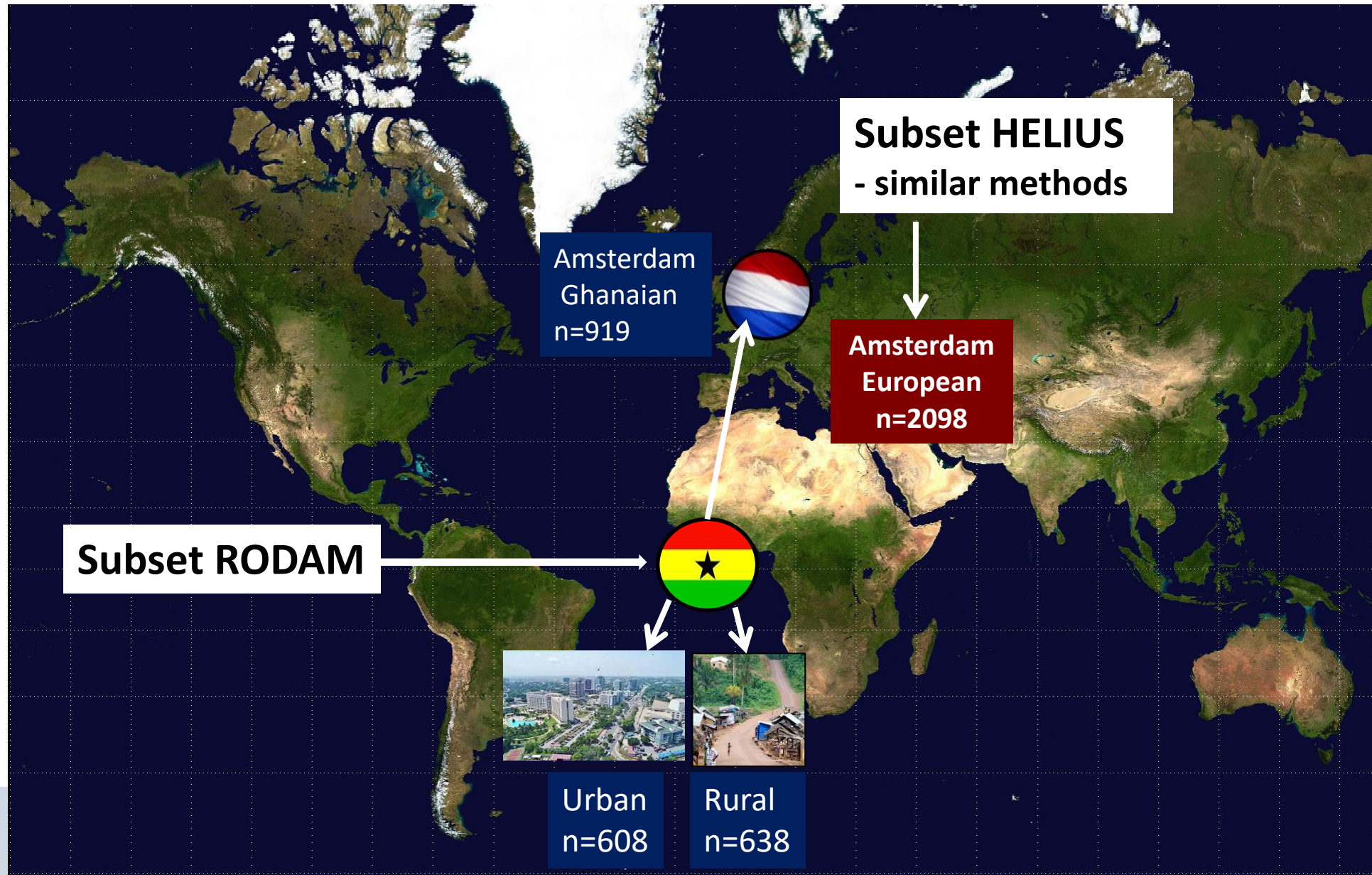


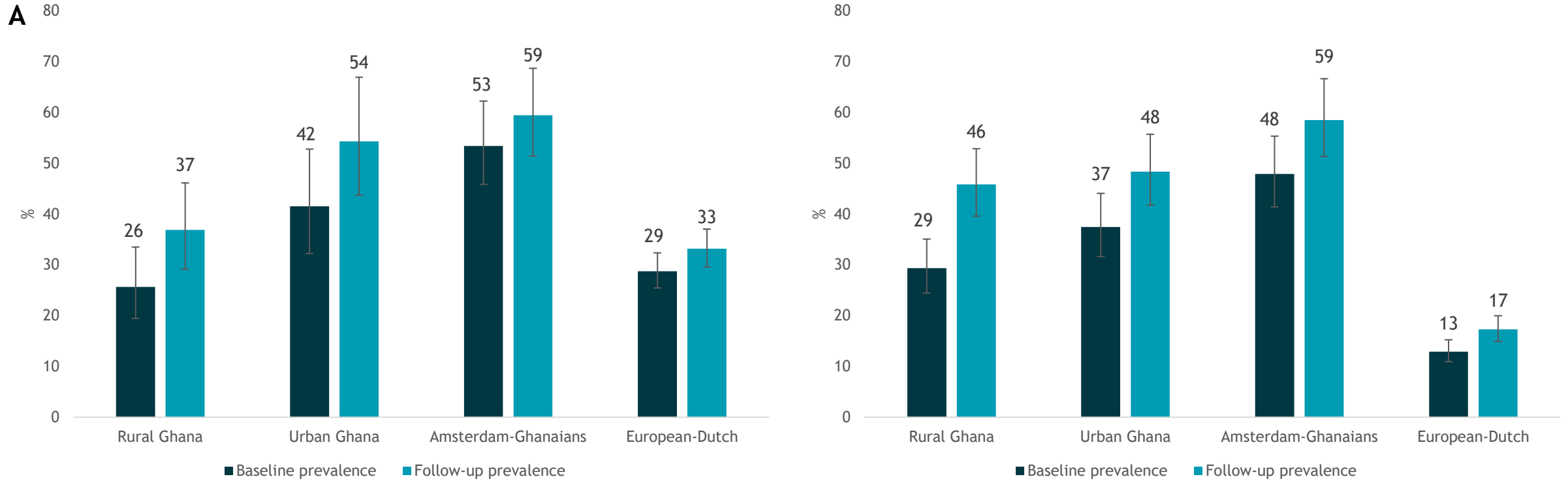
Hypothesis



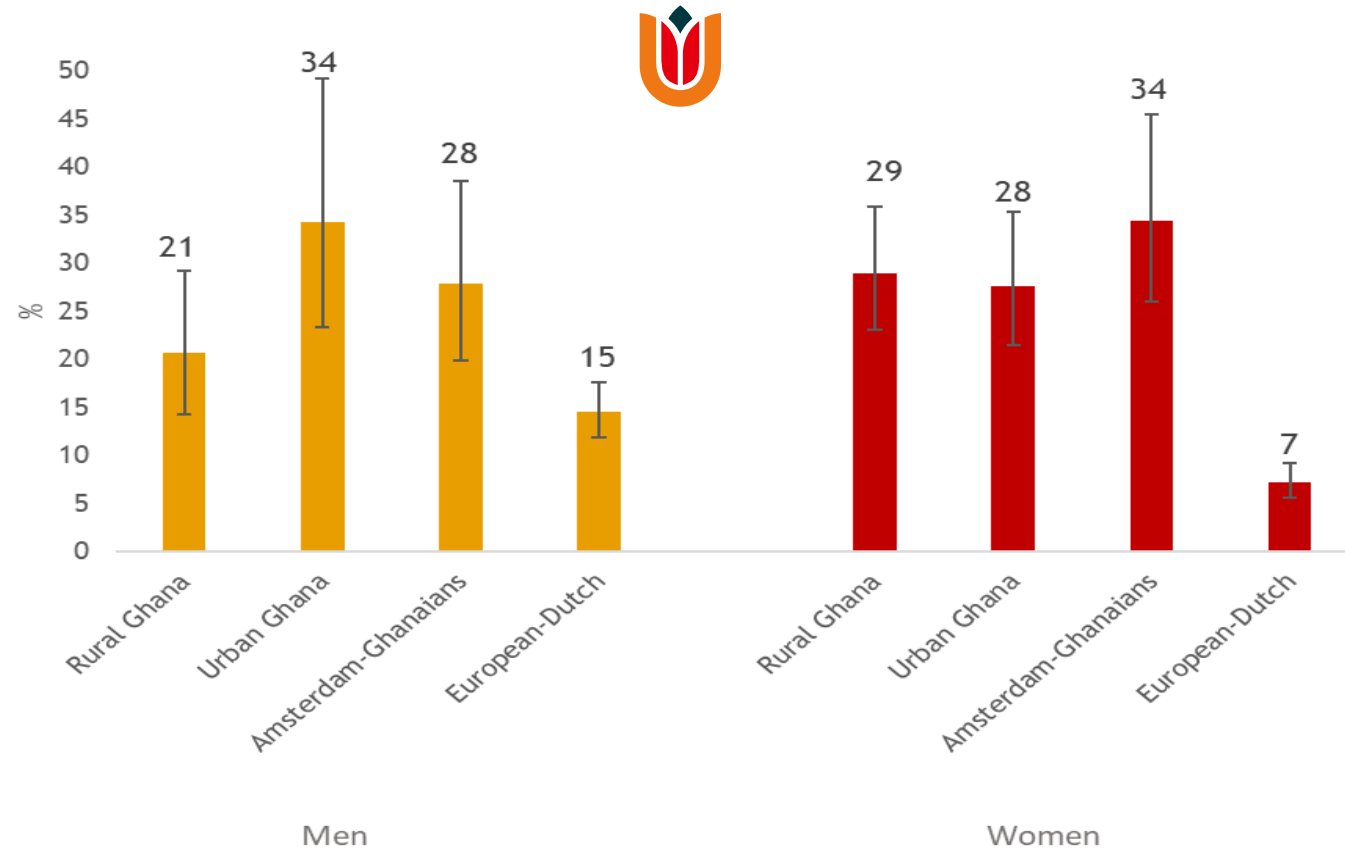
Pros-RODAM

Unique migrant and non-migrant prospective study





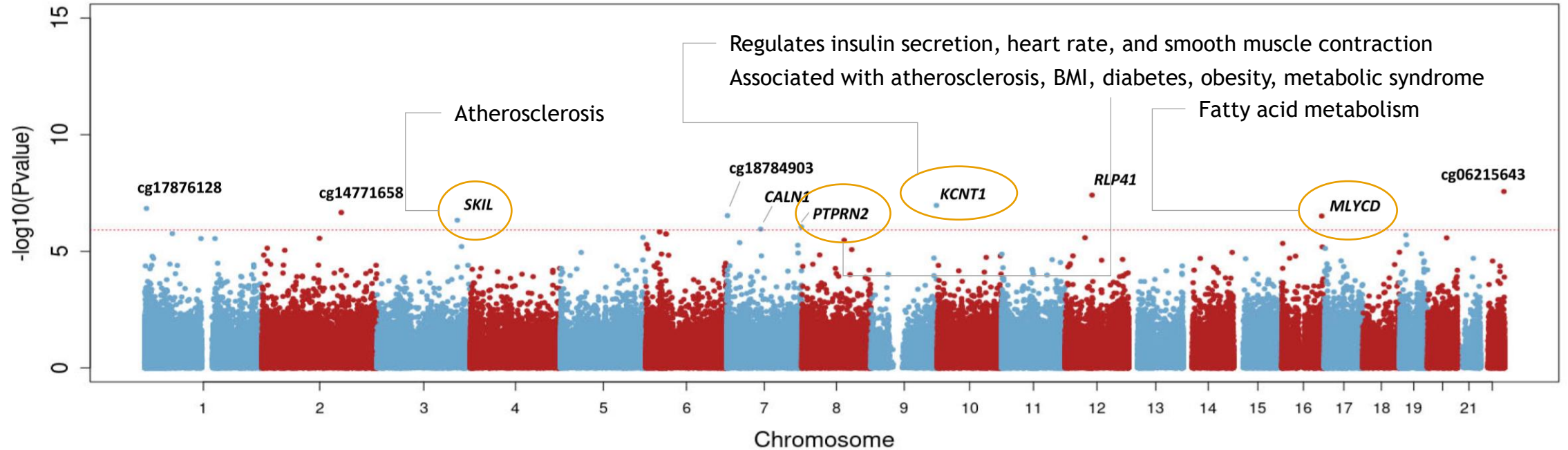
Hypertension prevalence increased over time among African migrants in the Netherlands & rural and urban Africa



Difference in hypertension incidence between location is not explained by conventional risk factors



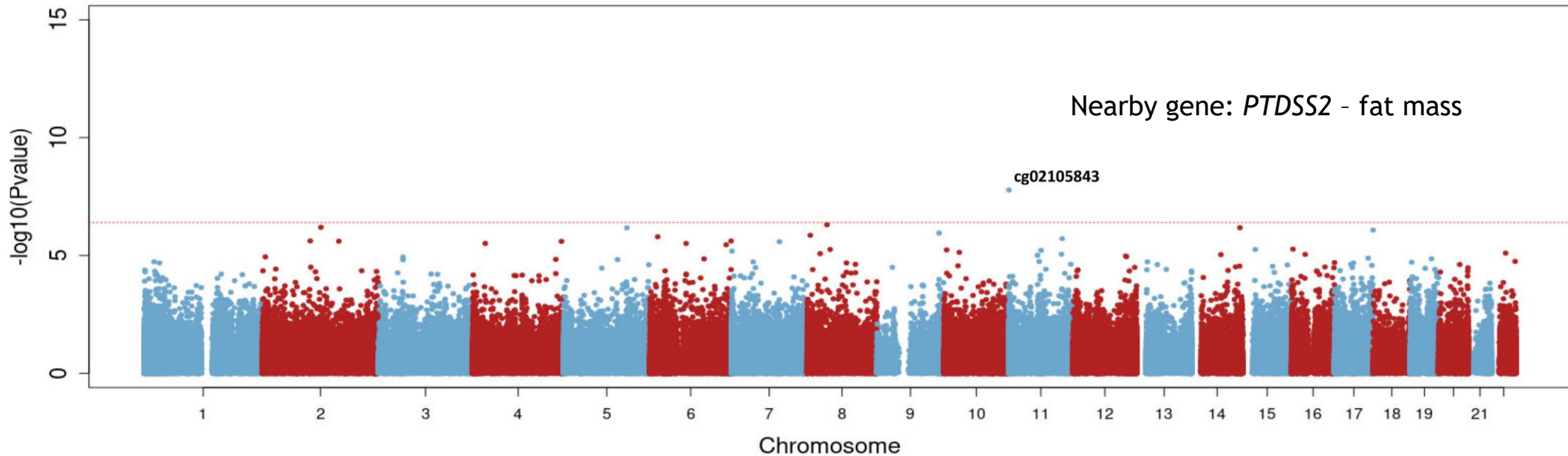
Aldosterone - DMPs



- Explained 46% of the variance in aldosterone concentration
- DMPs explained 19.6% in SBP and 24.2% in DBP



Renin - DMPs



- Explained 15% of the variance in renin concentration
- Top 5 DMPs explained 6.4% in SBP and 8.0% in DBP



Hypertension is major burden
in African migrants

Awareness & treatment rates
are higher, but BP control is
suboptimal especially in men



- Key specific factors driving
the high prevalence
incompletely understood.

- More research is needed to
shed light on this taking context
into account

Conclusion statements

Thanks