



Vigilancia, promoción
y atención a personas
con enfermedades crónicas

Type 2 diabetes *mellitus* burden of disease in Brazil between 1990 to 2019: a nationwide descriptive analysis of the Global Burden of Disease Study 2019

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Instituciones aliadas:



Objective

To describe the national and regional burden of T2DM in Brazil, its the main risk factors and the burden of T2DM attributable to those risk factors.

Methods

Type 2 diabetes mellitus (Level 4 Cause) → Fasting plasma glucose (FPG) ≥ 7 mmol/L (126 mg/dL) or those treated with anti-diabetic drugs or insulin for T2DM

Non-fatal estimates (Prevalence and Years Lived with Disability, YLD)

- MR-BRT crosswalk and DisMod-MR 2.1 Models with disability weights according to each sequelae

Fatal estimates (Deaths and Years of Life Lost, YLL)

- ICD-10 codes (E.11, E.11.1, E.11.3 - E11.9) and CODEm models by age > 15 years-old

Risk Factors

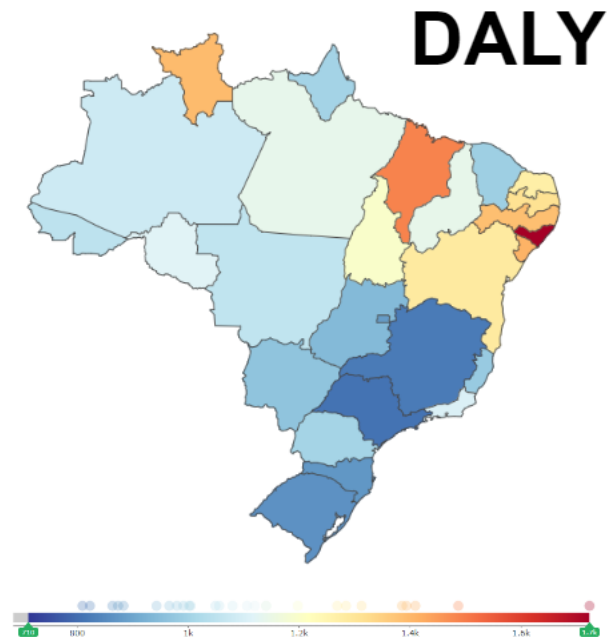
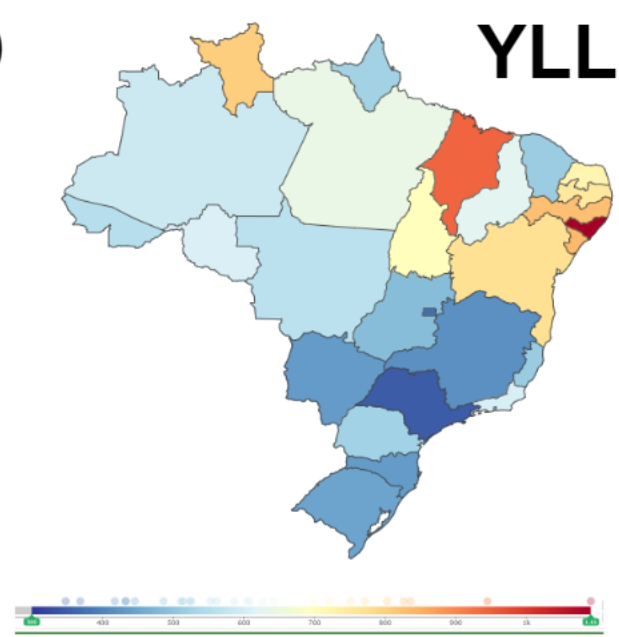
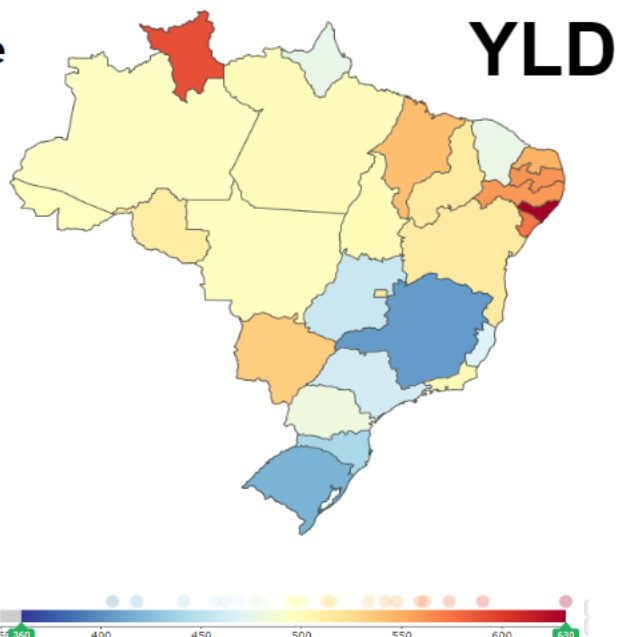
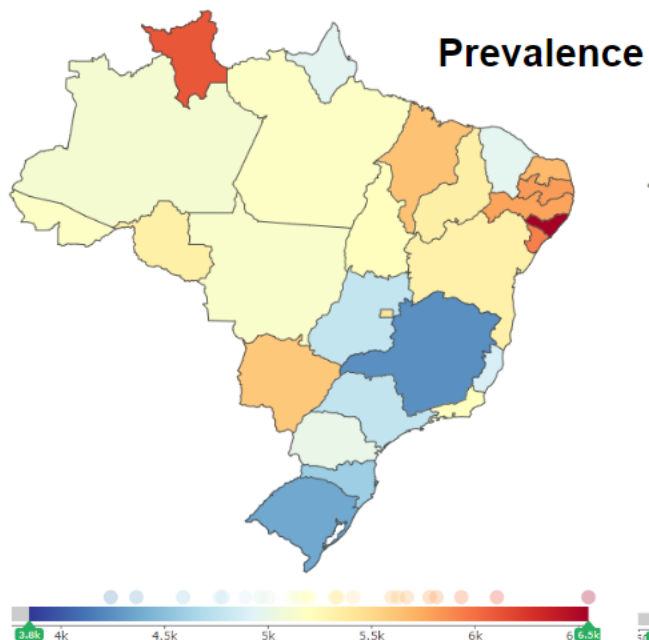
- Exposure (RR > 1 for T2DM) and Population Attributable Fraction (PAF) estimation
- Theoretical Minimum Risk Exposure Level (TMREL)



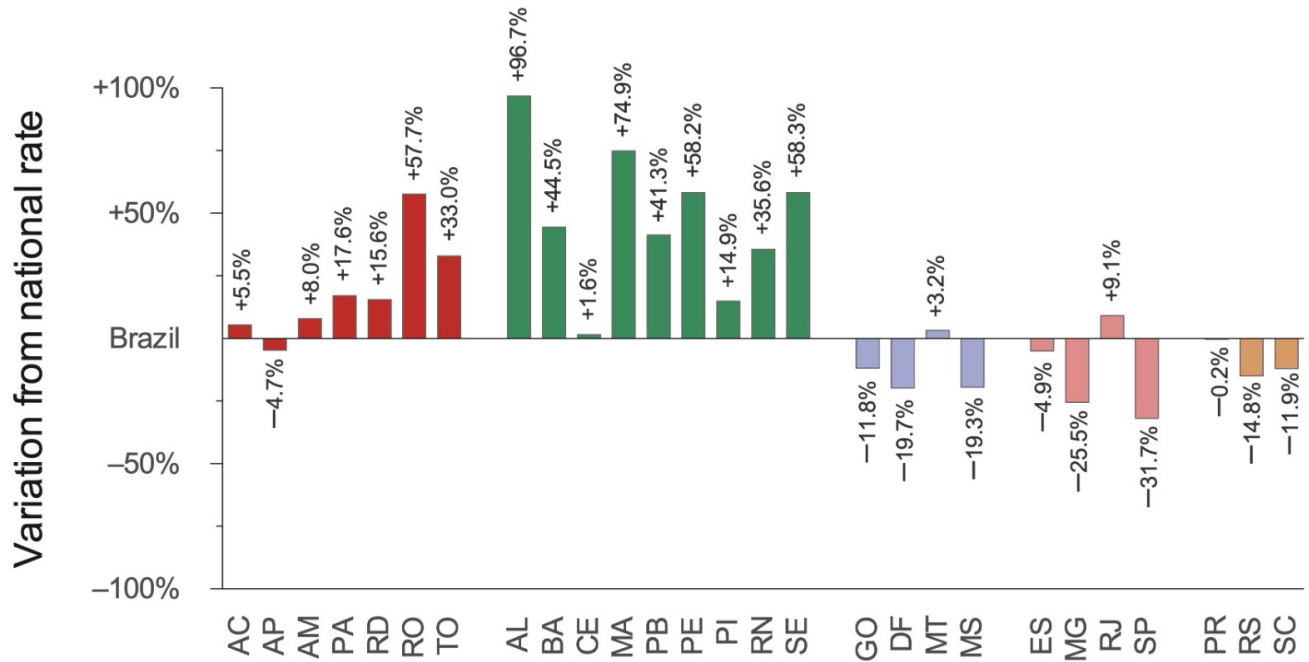
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Results

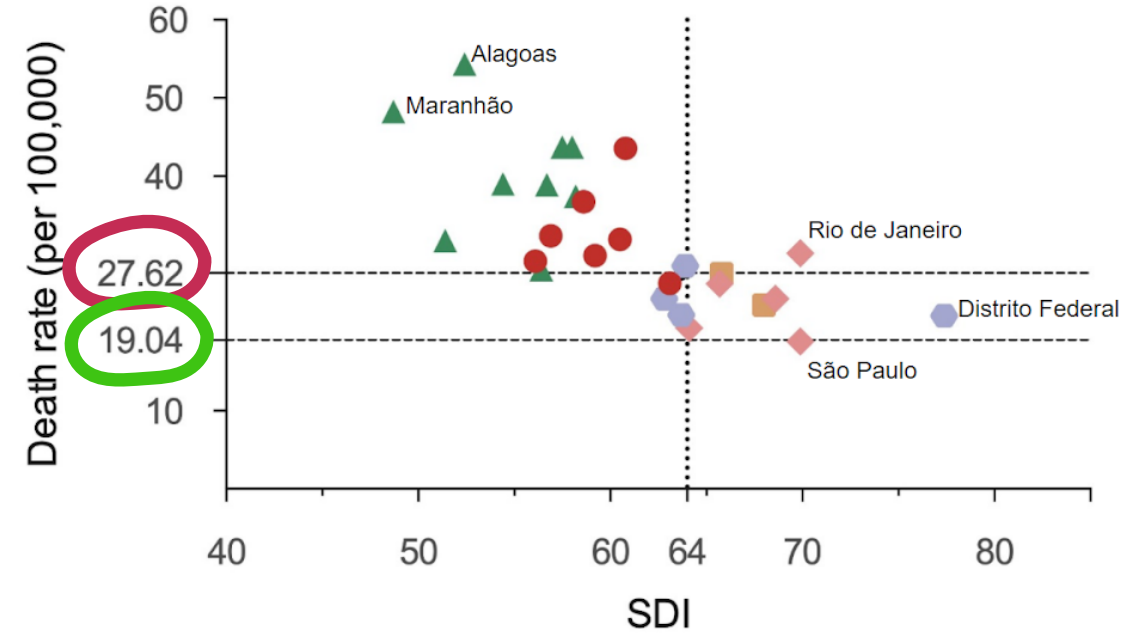
R1. Rates per 100,000 of prevalence, YLDs, YLL and DALYs for both sexes, age-standardized, in Brazil - 2019



R2. Change in T2DM DALYs rates against Brazil as a reference

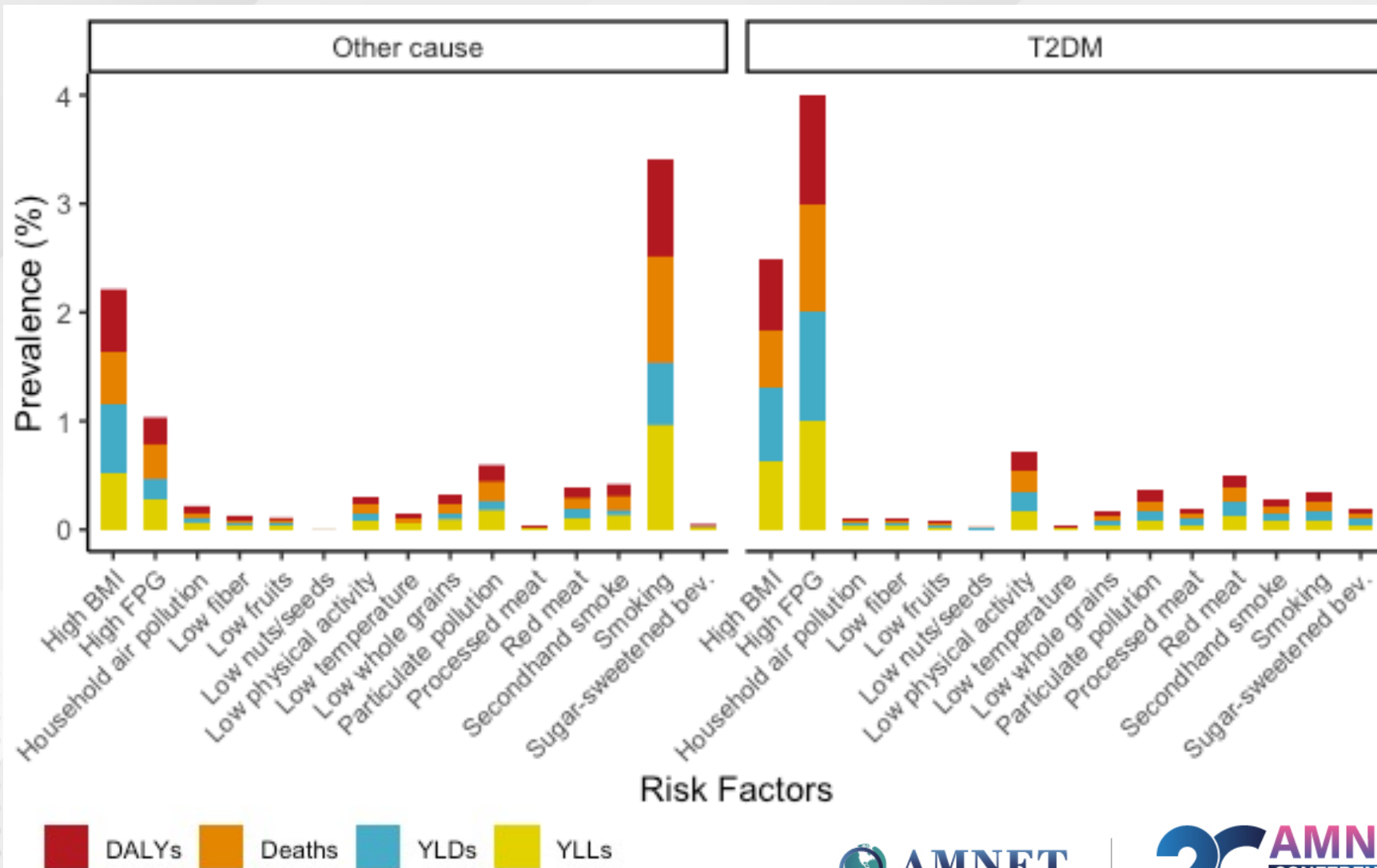


R3. Dispersion of Brazilian states between Brazilian SDI and death rates



- North region
- ◆ Central-West region
- South region
- ▲ Northeast region
- ◆ Southeast region

R4. T2DM risk factors & DALYs, YLDs, YLLs and death against all other Level 4 causes



Conclusion

Northeast region (represented by Alagoas) showed higher rates of YLD, YLL, deaths and DALYs for T2DM in 2019

SDI may be one of the contributors for differences across states, as regions with lower SDIs had lower rates of death, and vice versa

The three top risk factors associated with T2DM are still the same throughout the time and for all states, so focusing public health strategies on these risk factors can mitigate deaths and DALYs from T2DM in the whole country

Smoking is one of the main risk factors for other causes, but not for T2DM, although smoking policies focusing on T2DM may contribute to healthcare due to T2DM co morbidities



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