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The global burden of glomerulonephritis attributable to non-optimum temperature among adolescents and young adults in 204 countries and territories, 1990-2019

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Objectives : While non-optimal temperatures was ranked as the first environmental risk factor for death in glomerulonephritis (GN). Comprehensive information on the burden of GN due to non-optimum temperature among adolescents and young adults globally and whether socioeconomic inequality existed remain unknown.

Methods : We reported the mortality and disability-adjusted life-years (DALYs) for GN attributed to non-optimum among people 10-24 years old in 2019, and quantified the association and trends of inequality disease burden with socio-demographic index (SDI) and Universal Health Coverage (UHC) from 1990 to 2019, based on the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2019.

Results : In 2019, the global mortality, and DALYs of GN attributed to non-optimum temperatures among individuals aged 10-24 years were estimated at 0.02 [95% uncertainty interval 0.00, 0.05] and 1.65 [-0.03, 3.21] per 100 000 population respectively. Asia had the highest disease burden of GN attributed to non-optimum temperature, including low and high temperatures. From 1990 to 2019, the global burden of GN attributed to high temperatures showed a significant increase, and Western Sub-Saharan Africa saw the largest increase. The burden of GN attributed to non-optimum temperatures was higher in lower SDI and lower UHC countries, the inequality increased during the past 30 years.

Conclusions : Non-optimal temperatures have significantly affected the disease burden of GN in adolescents and young adults. National and international policies should urgently prioritize climate action to reduce emissions and combat extreme temperatures, promote UHC, focus on achieving health equality for young population both within and between countries, to ensure comprehensive health protection on GN against environmental threats in the younger generation and the whole population.

Figure1.jpg

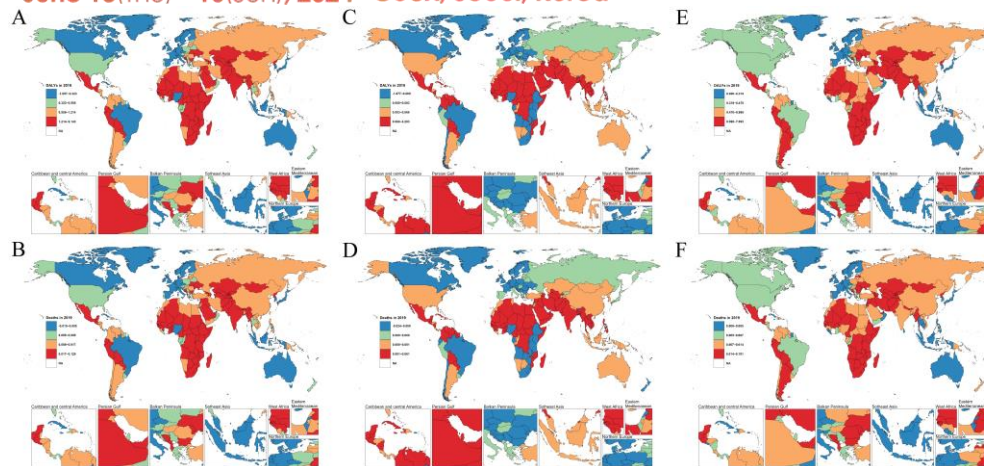


Figure1.jpg

