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Trends and socioeconomic inequality of CAKUT burden among children and adolescents in 204 countries, 1990-2019

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Objectives : Although congenital abnormalities of the kidney and urinary tract (CAKUT) is the leading cause of childhood onset chronic kidney disease (CKD) and kidney failure, comprehensive information on the disease burden among children and adolescents globally is lacking. We aim to report the trends and socioeconomic inequality of CAKUT burden for people aged 0-24 years from 1990 to 2019.

Methods : We reported the prevalence, mortality and disability-adjusted life-years (DALYs) for CAKUT based on the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2019, quantified the association of disease burden and socio-demographic index (SDI), calculated the slope index of inequality (SII) the relative index of inequality (RII) and concentration index.

Results : In 2019, the global prevalence, mortality, and DALYs of CAKUT among individuals aged 0-24 years were 167.11 (95%Confident Interval 166.97, 167.25), 0.30 (0.29, 0.30), and 32.22 (32.16, 32.29) per 100 000 population. The greatest prevalence, mortality and DALYs were recorded in the 0-4 year age group. The greatest mortality and DALYs were recorded in low SDI countries and territories. During 1990 to 2019, the prevalence, mortality and DALYs decreased globally, while in low and low-middle countries and territories the reduction was much less slower. India, Nigeria and Pakistan had the highest DALYs. Saudi Arabia and China exhibited a markedly decrease of CAKUT burden. Globally for every 0.1 increase in SDI, there was a 20.53% reduction in mortality, a 16.31% decrease in DALYs, but a 0.38% rise in prevalence.

Conclusions : Inequality for disease burden of varying SDI was increasing globally. Thus, specific preventive and health service measures are needed to reduce the global burden from CAKUT.

Figure 1.png

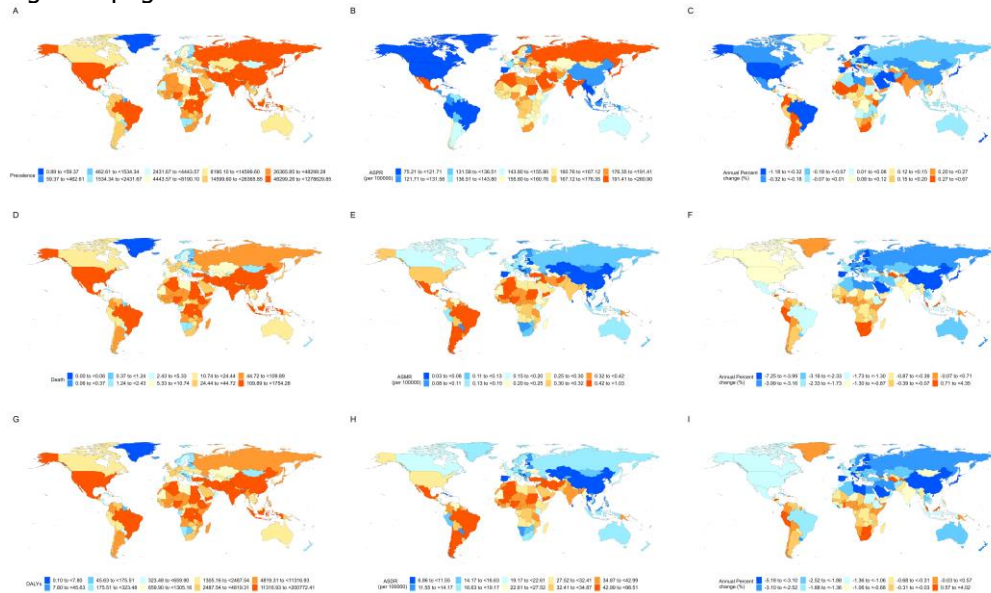


Figure 1.png

