

Projected Impact of Population Aging on Noncommunicable Disease Burden and Costs in the Kingdom of Saudi Arabia, 2020-2030

Authors : David C. Boettiger, Tracy Kuo Lin, Maram Almansour, Mariam M. Hamza, Reem Alsukait, Christopher H. Herbst, Nada Altheyab, Ayman Afghani, Faisal Kattan

Abstract : Background The number of people aged greater than 65 years per 100 people aged 20-64 years is expected to almost double in The Kingdom of Saudi Arabia (KSA) between 2020 and 2030. We therefore aimed to quantify the growing non-communicable disease (NCD) burden in KSA between 2020 and 2030, and the impact this will have on the national health budget. Methods Ten priority NCDs were selected: ischemic heart disease, stroke, type 2 diabetes, chronic obstructive pulmonary disease, chronic kidney disease, dementia, depression, osteoarthritis, colorectal cancer, and breast cancer. Age- and sex-specific prevalence was projected for each priority NCD between 2020 and 2030. Treatment coverage rates were applied to the projected prevalence estimates to calculate the number of patients incurring treatment costs for each condition. For each priority NCD, the average cost-of-illness was estimated based on published literature. The impact of changes to our base-case model in terms of assumed disease prevalence, treatment coverage, and costs of care, coming into effect from 2023 onwards, were explored. Results The prevalence estimates for colorectal cancer and stroke were estimated to almost double between 2020 and 2030 (97% and 88% increase, respectively). The only priority NCD prevalence projected to increase by less than 60% between 2020 and 2030 was for depression (22% increase). It is estimated that the total cost of managing priority NCDs in KSA will increase from USD 19.8 billion in 2020 to USD 32.4 billion in 2030 (an increase of USD 12.6 billion or 63%). The largest USD value increases were projected for osteoarthritis (USD 4.3 billion), diabetes (USD 2.4 billion), and dementia (USD 1.9 billion). In scenario analyses, our 2030 projection for the total cost of managing priority NCDs varied between USD 29.2 billion - USD 35.7 billion. Conclusions Managing the growing NCD burden in KSA's aging population will require substantial healthcare spending increases over the coming years.

Keywords : aging, non communicable disease, costs, Saudi Arabia

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