

A Health Policy Blueprint for Armenia: Tackling the Burden of Chronic Illness and Long COVID

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ABSTRACT

In the post-COVID-19 era, Armenia faces a dual epidemiological challenge: the persistent health burden of long COVID (LC) and a concurrent rise in noncommunicable diseases (NCDs), such as obesity, diabetes, hypertension, oncological diseases, and mental health disorders, particularly among middle-aged and elderly populations. The impact of immune system aging -immunosenescence - is essential concerning both the current pandemic and the future threats caused by infections. Excessive use of antibiotics and corticosteroids has been shown to disrupt the gut microbiome, potentially triggering immune dysregulation and promoting a state of chronic low-grade inflammation termed "inflammaging", which is increasingly recognized as a contributor to the persistence and severity of LC. The incidence of LC is estimated at 10–30% of non-hospitalized cases, 50–70% of hospitalized cases and 10–12% of vaccinated cases. A nationwide observational study assessing knowledge, attitudes, and practices (KAP) and LC burden among adults revealed significant post-COVID sequelae. Approximately 26.6% of respondents reported seeking medical care for LC symptoms, while 36% experienced persistent fatigue, 51.4% musculoskeletal pain, 27.8% memory disturbances, and 43% anosmia/ageusia. Notably, 24.7% self-medicated, often with antibiotics, frequently without physician guidance, highlighting critical gaps in public awareness and healthcare access. Using the WHO's methodology for estimating disease burden, including Disability-Adjusted Life Years (DALYs) and Quality-Adjusted Life Years (QALYs), we have quantified the impact of LC to be approximately 215,934 DALYs and 20,104 QALYs lost in Armenia. Policy recommendations include establishing a standardized LC case definition, adopting national clinical protocols, integrating AI-driven tools into e-health infrastructure, an expanding rehabilitation and mental health services. By aligning LC management with NCD prevention strategies and digital health transformation through a unified, person-centered approach, special vaccination strategies effectively protecting the older adults Armenia can strengthen system resilience and accelerate progress toward the 2030 global health agenda.

Keywords: long COVID, burden, DALYs, QALYs, health policy, AI

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