

## Prevalence of Chronic Diseases and Predictors of Mortality in Home Health Care Service: Data From Saudi Arabia

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**Abstract :** Introduction: The history of publicly funded Home Health Care (HHC) service in Saudi Arabia dates back to 1991. The first HC program was launched to provide palliative home care services for patients with terminal cancer. Thereafter, more programs launched across Saudi Arabia most remarkably was launching the national program for HHC by the Ministry Of Health (MOH) in 2008. The national HHC MOH program is mainly providing long-term care home care services for over 40,000 Saudi citizens. The scope of the HHC service program provided by the Saudi MOH is quite diverse, ranging from basic nursing care to specialized care programs, e.g., home peritoneal dialysis, home ventilation, home infusion therapy, etc. Objectives: The primary aim of our study is to report the prevalence of chronic conditions among Saudi people receiving long-term HHC services. Secondary aims include identifying the predictors of mortality among individuals receiving long-term HHC services and studying the association between frailty and poor health outcomes among HHC users. Methods: We conducted a retrospective and cross-sectional data collection from participants receiving HHC services at King Saud University Medical City, Riyadh, Saudi Arabia. Data were collected from electronic health records (EHR), patient charts, and interviewing caregivers from the year 2019 to 2022. We assessed functional performance by Katz's activity of daily living and the Bristol Activity of Daily Living Scale (BADLS). A trained health care provider assessed frailty using the Clinical Frailty Scale (CFS). Mortality was assessed by reviewing the death certificates if patients were hospitalized through discharge status ascertainment from EHR. Results: The mean age for deceased individuals in HHC was 78.3 years. Over twenty percent of individuals receiving HHC services were readmitted to the hospital. The following variables were statistically significant between deceased and alive individuals receiving HHC services; clinical frailty scale, the total number of comorbid conditions, and functional performance based on the KATZ activity of daily living scale and the BADLS. We found that the strongest predictors for mortality were pressure ulcers which had an odds ratio of 3.75 and p-value of  $< 0.0001$ , and the clinical frailty scale, which had an odds ratio of 1.69 and p-value of 0.002, using multivariate regression analysis. In conclusion, our study found that pressure ulcers and frailty are the strongest predictors of mortality for individuals receiving home health care services. Moreover, we found a high rate of annual readmission for individuals enrolled in HHC, which requires further analysis to understand the possible contributing factors for the increased rate of hospital readmission and develop strategies to address them. Future studies should focus on designing quality improvement projects aimed at improving the quality of life for individuals receiving HHC services, especially those who have pressure ulcers at the end of life.

**Keywords :** homecare, Saudi, prevalence, chronic

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