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Humanistic and Economic Burden of Patients with Cardiorenal Metabolic (CRM) Conditions: A Systematic Literature Review

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Abstract

Background: A comprehensive understanding of the burden of CRM conditions is needed to guide targeted interventions.

Aim: This SLR assessed the humanistic and economic burden of T2D, CVD, and CKD.

Methods: Following PRISMA guidelines, Embase and Medline databases were searched to identify observational, RWE, and economic-model studies in populations ≥ 18 years old with CKD, T2D, and CVD. Outcomes of interest included humanistic (e.g., health related QoL, functional impairment, QALY) and economic burden. English-language studies from Jan 2011 to Jan 2022 were included. Relevant congress abstracts/posters were identified from the 2 previous years.

Results: Of 22 studies selected (13 US; 9 non-US), 1 Chinese study reported QoL data, 8 reported healthcare resource utilization (HCRU), 7 reported cost, and 6 reported HCRU and cost. Multimorbidity and advanced stages of CKD were associated with higher medical costs and HCRU for patients with CRM across all studies. Increasing age was associated with more comorbidities, leading to greater economic burden among patients ≥ 65 years old. Higher costs and HCRU were observed in patients with all 3 conditions compared to those with fewer comorbidities. Higher healthcare expenditures and HCRU was observed among urban insured compared with uninsured populations. Black patients had lower odds of using healthcare services compared to patients who identified as White, Asian/Pacific Islander, or Hispanic.

Conclusions: This SLR identified a trend of increasing healthcare costs and HCRU commensurate with an increasing number of CRM comorbidities. Further research evaluating the economic and humanistic burden of CRM conditions, especially in patients from racial/ethnic groups, is needed.