Factors associated with hospital readmission in chronic kidney disease: A literature review

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Introduction: Chronic kidney disease (CKD) is associated with an increased rate of hospital readmission. It increases the risk of readmission in patients hospitalised for other reasons.

Aim: To systematically synthesise factors associated with hospital readmission across the spectrum of CKD.

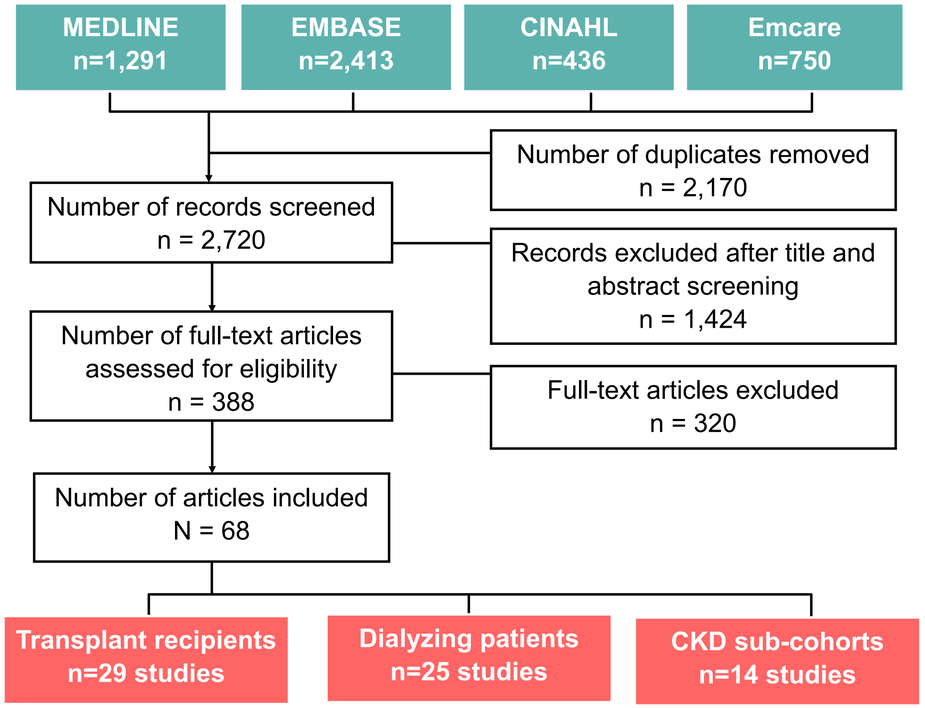

Figure 1: PRISMA flow diagram of study selection

Methods: This review was registered with PROSPERO: CRD42019140099. On March 31, 2019, four databases (MEDLINE Complete, CINAHL Complete, EMBASE and Emcare) were searched for studies that examined factors associated with readmission in adult patients with CKD was conducted.

Results: The search retrieved 3,593 citations (Figure 1). Sixty-eight relevant studies were retrieved. Factors associated with a higher odds of readmission is summarized in Table 1.

Transplant recipients n=29 studies

- Donor-related factors (e.g. non-Hispanic, every 10-year ↑ in age)
- Delayed graft function without kidney recovery by discharge
- A poor understanding of the medication regimen

Dialyzing patients n=25 studies

- Comorbidities (e.g. depression, pulmonary disease)
- Demographics (e.g. poorer social support, <40 years of age)
- Weekend discharge
- Catheter-related infections

CKD sub-cohorts n=14 studies

- A decreased lumbar bone mineral density ($\bar{X}$=-2.94, SD=0.68)
- Malnutrition
- A length of stay of 5-6 days as opposed to <5 or ≥7 days

Table 1: Factors associated with readmission

Conclusion: The risk factors influencing hospital readmission vary across the spectrum of CKD. To reliably predict readmission risk, a prediction tool tailored to specific CKD cohort is needed.

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