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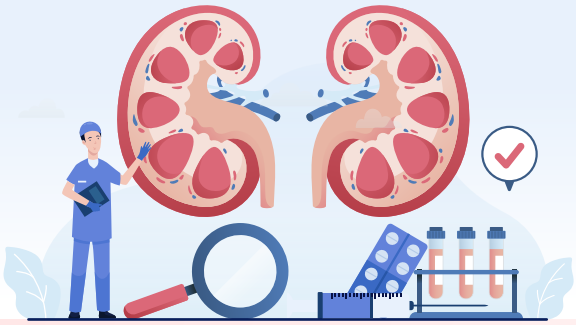
Policy Strategies to Enhance Uptake of Comprehensive Conservative Care in Advanced Chronic Kidney Disease : A Systematic Review and Meta-Analysis



Authors: Natasha Chawla, Yot Teerawattananon, Natcha Yongphiphatwong, Natanong Thamcharoen, Henny Aryani, Yin May Tun, Dimple Haresh Butani, Rujira Ngam-prukwanit, Thunyarat Anothaisintawee

Background:

Comprehensive conservative care (CCC) is an established treatment option for patients with advanced chronic kidney disease (CKD) who are not candidates for kidney replacement therapy (KRT), such as older adults and those with multiple comorbidities. Elderly patients who choose CCC reported improvements in quality of life, reduced symptom burden, fewer hospitalizations, and a greater likelihood of dying in their preferred setting. Despite its benefits, CCC uptake remains low. Factors such as physician education, patient awareness, and healthcare policies significantly influence the adoption of CCC in these patients.

Aim:

This systematic review aims to evaluate the effectiveness of policy strategies to enhance and promote the adoption of CCC for advanced CKD patients who may not be suitable candidates for KRT.

Methods:

- Medline, SCOPUS and CINAHL were searched since 2000 through 24 July 2024.
- The search terms were based on the population (i.e. chronic kidney disease, end stage kidney disease), intervention (i.e. conservative care, supportive care, palliative care) and outcomes (i.e. uptake, success, utilization).
- Inclusion criteria were observational studies, quasi-experimental studies and randomized controlled trials (RCTs) that included patients with CKD or ESKD as participants, and assessed the effectiveness of interventions or policies designed to promote or improve the utilization or preference of CCC.
- Study selection, data extraction, and risk of bias assessment were performed independently by two reviewers.

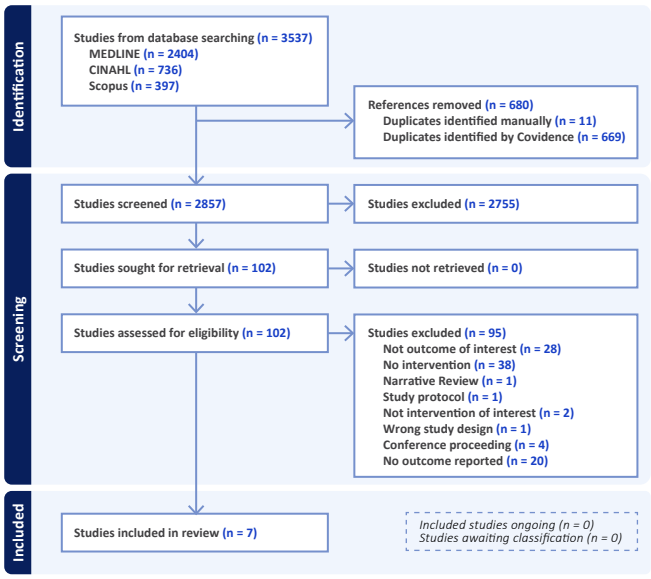
Odds ratios (OR) were estimated for each study and were pooled using the inverse variance method if there was no heterogeneity between studies, or the random effects model (DerSimonion and Laird method) if heterogeneity was present.

For more information

Results:

- A total of 2832 abstracts were screened with 102 full text reviews and 7 studies were finally included with 961 CKD patients, see **Figure 1.**
- All 7 studies had moderate or some concerns for the risk of bias.
- Five studies were categorized as education and training interventions which provided knowledge about CCC to patients and their families. Providing this intervention slightly increased preference for CCC among CKD patients, with no statistical significance, compared to no intervention with a pooled OR of 1.05 (95% CI: 0.62–1.76; I^2 = 0%), see **Figure 2.**
- Two studies explored restructuring service provision and used the "surprise question" on the renal multidisciplinary team – "would you be surprised if this patient died in the next 12 months?". A register was established by Harrison et al for "no" responses to notify general practitioners prompting CCC services referral and significantly increased CCC uptake in patients with advanced CKD. Salat et al used the surprise question to prompt service providers to consider CCC and significantly increased CCC preference.

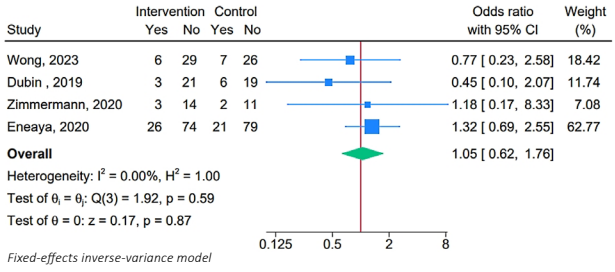
Figure 1. PRISMA flow diagram



Discussion:

- Our findings suggest that restructuring service provision and implementing combined educational and service restructuring interventions may be effective strategies to increase both the preference for and utilization of CCC among patients with advanced CKD.
- Implementing prognostic assessments with the "surprise question" significantly increased the uptake of CCC. Tools like the surprise question and the Clinical Frailty Score (CFS) can assist in prognostication and alert healthcare providers to consider future management options.
- Though a lack of education and training may represent a significant barrier, our study found that providing interventions solely focused on education and training did not significantly increase CCC uptake or preference among patients with advanced CKD.
- Our study had a limited number of included studies with small sample size which highlights the scarcity of research on policies for CCC. Additional RCTs are essential to strengthen the evidence base and support the development of effective policy interventions.

Figure 2. Meta-analysis of education and training interventions on preference for CCC among CKD patients



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Contact: natasha.chawla08@gmail.com