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Renal access coordinators' impact on hemodialysis patient outcomes and associated service delivery: a systematic review

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Executive summary

Background
Renal access coordinators contribute specifically to dialysis access care for people with chronic and end stage renal disease. Since the introduction of renal access coordinators into Australia in the early 2000s, there have been anecdotal examples of associated improvements in patient outcomes and service delivery; however scant published quantitative evidence exists. Thus, the impact of the implementation of renal access coordinators has not undergone a rigorous review to date.

Objective
The objective of this systematic review was to critically appraise and synthesize the best available evidence related to the impact of renal access coordinators on dialysis patient outcomes and associated service delivery.
Inclusion criteria

Types of participants
This review considered studies that included renal access coordinators (noting variations of the titles) and adult hemodialysis patients (aged 18 years and over).

Types of intervention(s)
This review considered studies that evaluated the effectiveness of the renal access coordinator. This role typically consists of clinical and administration duties such as providing pre-dialysis access coordination, access surveillance patient education and nurse education.

Types of studies
The types of studies considered within this review included experimental and epidemiological study designs. Thus randomized controlled trials (RCT), non-randomized controlled trials, and quasi-experimental, before and after studies, prospective and retrospective cohort studies were considered as were case control studies, analytical cross sectional studies and descriptive cross sectional studies.

Types of outcomes
Patient outcomes considered included: days to first vascular access complication (such as stenosis or thrombosis) and/or primary intervention (such as angioplasty or surgical intervention); percentage of central line insertions (negative); rate of arteriovenous fistula (AVF)/arteriovenous graft (AVG)/central venous catheter (CVC) at start of dialysis (incidence); prevalent rate of AVF/AVG/CVC; time to occlusion of AVF and time from referral to surgery. Service outcomes included: knowledge/up skilling of renal nurses; cannulation skills, ultrasound skills, knowledge of anatomy and physiology and other access related knowledge.

Search strategy
The search strategy aimed to locate published and unpublished studies, utilizing a three-step searching approach. Studies published in English from 1990 to October 2013 were considered for inclusion in this review.

Methodological quality
The studies were assessed by two independent reviewers using the appropriate standardized critical appraisal instruments from the Joanna Briggs Institute.

Data collection
Data were extracted from papers included in the review using the standardised data extraction tool from the Joanna Briggs Institute, namely JBI Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI).