

P373

## P373 -Prescribing Safety Indicators In Patients With Chronic Kidney Disease: A Systematic Review

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### Introduction

People with chronic kidney disease (CKD) have high levels of co-morbidity and polypharmacy meaning these patients are at increased risk of developing drug related problems. A systematic review published in 2014 collated indicators of prescribing safety in general practice, informing quality measures in the Royal College of General Practitioner Patient Safety Toolkit. This study aims to perform an updated systematic review, collating prescribing safety indicators (PSIs) of importance to people with CKD from the published literature.

### Methods

PSIs were defined as statements describing a prescribing event that puts a patient at risk of potential harm, with emphasis placed on prescribing safety for adults (age >18) with CKD.

Three separate processes were used to identify PSIs. Firstly, PSIs were extracted from the aforementioned systematic review. Cited papers and their reference lists were searched (extraction 1). Additionally, two separate systematic literature searches were performed (Medline; Embase; Pubmed; Web of Science; CINAHL). The first replicated the search strategy from extraction 1 to identify publications since the initial search in 2012 (extraction 2). The second aimed to identify publications specifically relating to individuals with CKD (extraction 3), by supplementing the initial search strategy with terms relating to CKD and hospital outpatient care. Two authors screened identified titles and abstracts. One author read full papers identified for inclusion and extracted every statement from the main text, abstract or tables of the publications where a prescribing recommendation was made.

PSIs from extraction processes 1, 2 and 3 were collated. Each PSI was screened by one of three specialist assessors (two renal physicians and a senior renal pharmacist). Indicators were graded as being relevant to the general population (G), relevant only to people with CKD/end stage kidney disease (C), or relevant to the general population, with special relevance to individuals with CKD (S). Additionally, PSIs were categorised in terms of whether the potential harm was direct (D) or through omission (O). Examples demonstrated in table 1.

### Results

From extractions 1, 2 and 3 8721 papers were identified, of which 443 papers met inclusion criteria and were read in full. A prescribing recommendation was made in 159 of these papers and resulted in the extraction of 3185 possible PSIs. All possible PSIs were assessed, of which 398 did not meet PSI definition according to reviewers leaving an overall total of 2787 indicators.

Following further assessment 998 (35.8%) PSIs were identified as being only applicable to patients with CKD (C), 902 (32.4%) PSIs were relevant to the general population but more relevant in CKD patients (S), and 887 (31.8%) PSIs were relevant to general population (G). With regards to potential harm 2622 (94.1%) indicators resulted in direct harm and in 165 (5.9%) indicators harm was secondary to omission. From PSIs distinctive to patients with CKD (C), 963 (96.5%) resulted in direct harm and omission resulted in harm in 35 (3.5%).

### Discussion

This study has systematically identified indicators of prescribing safety. Identification of PSIs more applicable to individuals with CKD highlights the importance of renal function to prescribing safety.