

Documents

Nahas, A.R.M.F.

The role of pharmacists in the management of AKI patients: What recent studies added to our knowledge?
(2023) *Journal of Nephropathology*, 12 (3), art. no. e17360, .

DOI: 10.34172/jnp.2022.17360

Department of Pharmacy Practice, Faculty of Pharmacy, International Islamic University Malaysia, Pahang, Malaysia

Abstract

Introduction: Acute kidney injury (AKI) is a complex syndrome requiring special management. It also complicates the prognosis of many hospitalized patients. Some essential yet nephrotoxic medications and the use of certain procedures that may alter renal hemodynamics further complicate the management of AKI patients. Fortunately, as part of the renal care team, pharmacists can have a significant role in the multidisciplinary approach used to optimize renal patients' health-related quality of life by delivering safe and effective pharmaceutical care. **Objective:** The present review aims to explore pharmacists' contributions to the management of patients with AKI as well as their influence on improving renal patients' care. **Methods:** An online search was performed in the databases PubMed, Scopus, and ScienceDirect for relevant articles published in English between 1 January 2015 and 31 December 2021. Review articles, books, guidelines, websites, and conference proceedings were excluded. **Results:** Only 12 articles out of 51 initially gathered met the eligibility criteria for this review. The three main roles that pharmacists play in the management of AKI patients are patients' education, collaborating with other renal care practitioners, and identifying and solving drug-related problems (DRPs). The latter task span includes medication reconciliation, dosage adjustments, and identifying adverse drug reactions. **Conclusion:** In view of the complexity of the AKI course, trained pharmacists, as members of the renal care team, can play a pivotal role in managing AKI patients and minimizing their medications burden. This can positively impact the overall renal care process as well as the patient's outcome. Further studies can provide more support to the importance of pharmacists' role in managing AKI. © 2023 The Author(s); Published by Society of Diabetic Nephropathy Prevention.

Author Keywords

Acute kidney injury; Drug-related problems; Intervention; Patients; Pharmacist; Role

Index Keywords

acute kidney failure, adverse drug reaction, creatinine blood level, estimated glomerular filtration rate, hemodynamics, human, interdisciplinary research, kidney injury, patient care, pharmaceutical care, pharmacist, pharmacy student, physician, prescription, quality of life, Review, systematic review

Funding details

International Islamic University Malaysia IUMRC-RIGS20-006-0006

This research was funded by International Islamic University Malaysia (grant number : RC-RIGS20-006-0006).

References

- Goyal, A, Daneshpajouhnejad, P, Hashmi, MF, Bashir, K.
Acute Kidney Injury,
[Updated 2022 Feb 16] StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan
- Makris, K, Spanou, L.
Acute Kidney Injury: Definition, Pathophysiology and Clinical Phenotypes
(2016) *Clin Biochem Rev*, 37, pp. 85-98.
- Al Raiisi, F, Stewart, D, Fernandez-Llimos, F, Salgado, TM, Mohamed, MF, Cunningham, S.
Clinical Pharmacy Practice in the care of chronic kidney disease patients: A systematic review
(2019) *Int J Clin Pharm*, 41, pp. 630-666.
- Sim, TF, Hattingh, HL, Sunderland, B, Czarniak, P.
(2020) *Effective communication and collaboration with Health Professionals: A qualitative study of primary care pharmacists in Western Australia*, 15, p. e0234580.

- Blakeman, T, Harding, S, O'Donoghue, D.
Acute kidney injury in the community: why primary care has an important role
(2013) *Br J Gen Pract*, 63, pp. 173-174.
- Vicary, D, Hutchison, C, Aspden, T.
Avoiding acute kidney injury in primary care: attitudes and behaviours of general practitioners and community pharmacists in Hawke's Bay
(2020) *J Prim Health Care*, 12, pp. 244-256.
- Vicary, D, Hutchison, C, Aspden, T.
Demonstrating the value of community pharmacists in New Zealand educating a targeted group of people to temporarily discontinue medicines when they are unwell to reduce the risk of acute kidney injury
(2020) *Int J Pharm Pract*, 28, pp. 569-578.
- McDaniel, BL, Bentley, ML.
The role of medications and their management in acute kidney injury
(2015) *Integr Pharm Res Pract*, 4, pp. 21-29.
- Yamamoto, T, Nakayama, I, Kawakatsu, Y, Yamamoto, T, Ishigami, N, Watanuki, K
Effects of pharmacist participation in chronic kidney disease (CKD) network and CKD manual distribution on drug-related kidney injury
(2019) *Pharmacoepidemiol Drug Saf*, 28, pp. 887-896.
- Hawley, CE, Triantafylidis, LK, Paik, JM.
The missing piece: Clinical pharmacists enhancing the interprofessional nephrology clinic model
(2019) *J Am Pharm Assoc (2003)*, 59, pp. 727-735.
- Elvey, R, Howard, SJ, Martindale, AM, Blakeman, T.
Implementing post-discharge care following acute kidney injury in England: a single-centre qualitative evaluation
(2020) *BMJ Open*, 10, p. e036077.
- Phipps, DL, Morris, RL, Blakeman, T, Ashcroft, DM.
What is involved in medicines management across care boundaries? A qualitative study of healthcare practitioners' experiences in the case of acute kidney injury
(2017) *BMJ Open*, 7, p. e011765.
- Stoops, C, Stone, S, Evans, E, Dill, L, Henderson, T, Griffin, R
Baby NINJA (Nephrotoxic Injury Negated by Just-in-Time Action): Reduction of Nephrotoxic Medication-Associated Acute Kidney Injury in the Neonatal Intensive Care Unit
(2019) *J Pediatr*, 215, pp. 223-228.
e6
- Bruning, K, Selder, F.
From hospital to home healthcare: the need for medication reconciliation
(2011) *Home Healthc Now*, 29, pp. 81-90.
- Song, Y-K, Jeong, S, Han, N, Na, H, Jang, HY, Sohn, M
Effectiveness of Clinical Pharmacist Service on Drug-Related Problems and Patient Outcomes for Hospitalized Patients with Chronic Kidney Disease: A Randomized Controlled Trial
(2021) *J Clin Med*, 10, p. 1788.
- Manley, HJ, Carroll, CA.
The clinical and economic impact of pharmaceutical care in end-stage renal disease patients
(2002) *Semin Dial Semin Dial*, 15, pp. 45-49.

- Daifi, C, Feldpausch, B, Roa, PA, Yee, J.
Implementation of a Clinical Pharmacist in a Hemodialysis Facility: A Quality Improvement Report
(2021) *Kidney Med*, 3, pp. 241-247.
e1
- Patricia, NJ, Foote, EF.
A pharmacy-based medication reconciliation and review program in hemodialysis patients: a prospective study
(2016) *Pharm Pract (Granada)*, 14, p. 785.
- Sukkha, S, Rattanavipanon, W, Chamroenwit, B, Sangnurak, M, Nathisuwan, S
Quality assessment and cost saving of renal dosing recommendation by clinical pharmacists at medical wards in Thailand
(2020) *Int J Clin Pharm*, 42, pp. 610-616.
et. al
- Coulter, CV.
The role of the suspicious renal pharmacist in identifying unusual adverse drug reactions-why this is not a small problem
(2018) *Int J Clin Pharm*, 40, pp. 775-777.

Correspondence Address

Nahas A.R.M.F.; Department of Pharmacy Practice, Pahang, Malaysia; email: abd_mfn@hotmail.com

Publisher: Society of Diabetic Nephropathy Prevention

ISSN: 22518363

Language of Original Document: English

Abbreviated Source Title: J. Nephrothol.

2-s2.0-85163672107

Document Type: Review

Publication Stage: Final

Source: Scopus

ELSEVIER

Copyright © 2023 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

 RELX Group™