



Clinical Pharmacist-Led Medication Reconciliation Supplemented with Medication Review in Chronic Kidney Disease Admitted Patients: a Cost-Benefit Analysis

Shoroq M. Altawalbeh, PharmD, PhD, Nahlah M. Sallam, M.S, Minas Al-Khatib, PharmD, Osama Y. Alshogran, M.S, PhD, Mohammad S. Bani Amer, MD

Department of Clinical Pharmacy, Faculty of Pharmacy, Jordan University of Science and Technology, Irbid, Jordan.
Department of Internal Medicine, Faculty of Medicine, Jordan University of Science and Technology, Irbid, Jordan.

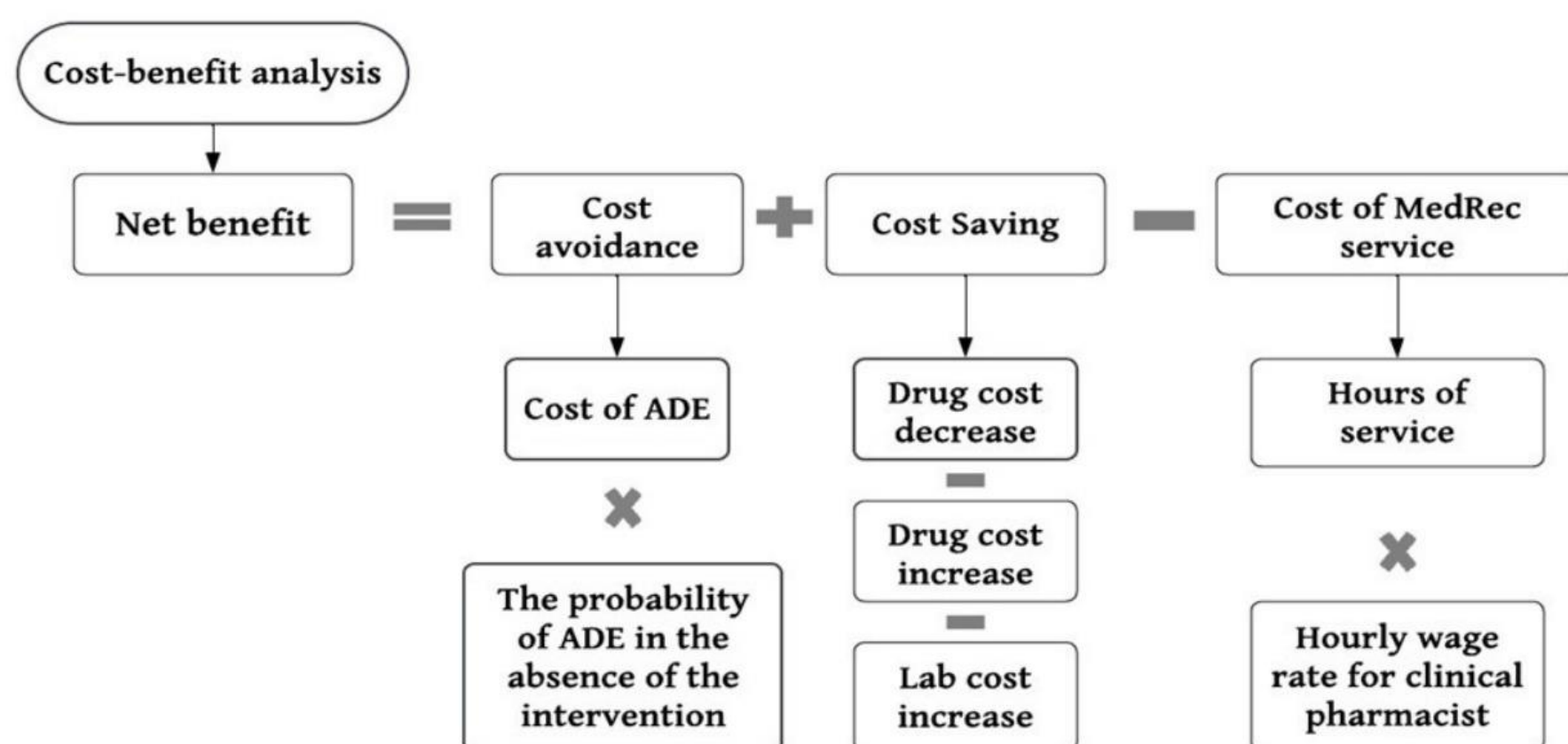


Background & Goals

- ❖ Patients with CKD are very vulnerable to medication discrepancies and other Drug related problems (DRPs).
- ❖ Medication reconciliation is a healthcare service directed primarily by a clinical pharmacist and aimed at preventing and resolving DRPs and proposed to reduce health expenditures
- ❖ The economic burden of medication discrepancies and other DRPs is understudied, particularly in developing countries, including Jordan.
- ❖ There is a dearth of data regarding the efficiency of clinical pharmacy services implemented in patients with CKD, especially in low-income to middle-income countries.
- ❖ This study aimed to evaluate the cost-benefits of implementing a clinical pharmacist-led service for supplemented medication reconciliation among admitted patients with CKD in Jordan.

Methods

The Cost-Benefit Analysis Model:



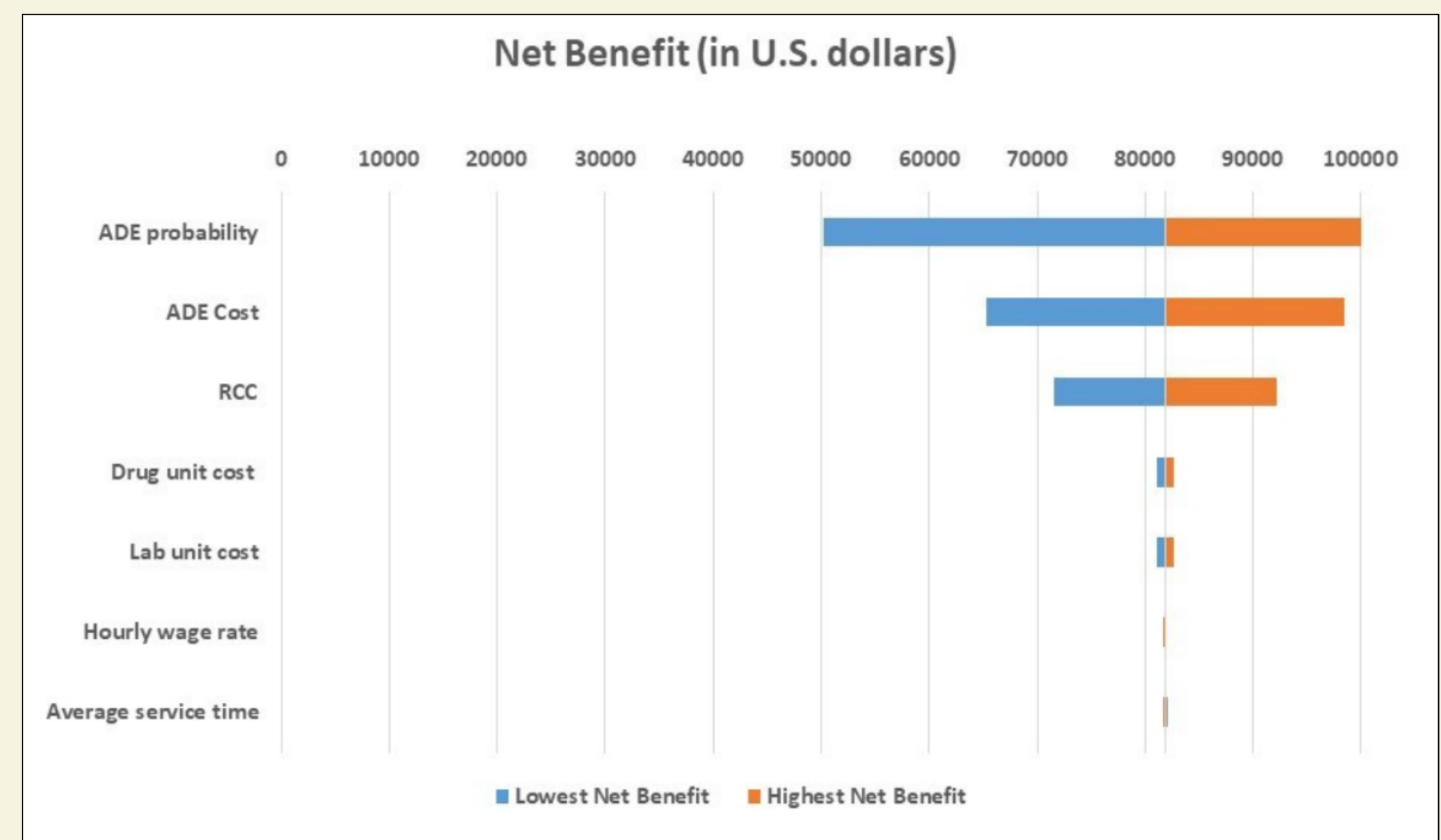
Results of Cost-Benefit Analysis

Outcome	Value (\$)
Intervention cost over 4 months	713.70
Cost avoidance of all DRPs	83,052.4
Total cost saving	- 467.5
Net benefit over the study period (4 months)	81,871.15
Benefit to cost ratio	115.7:1

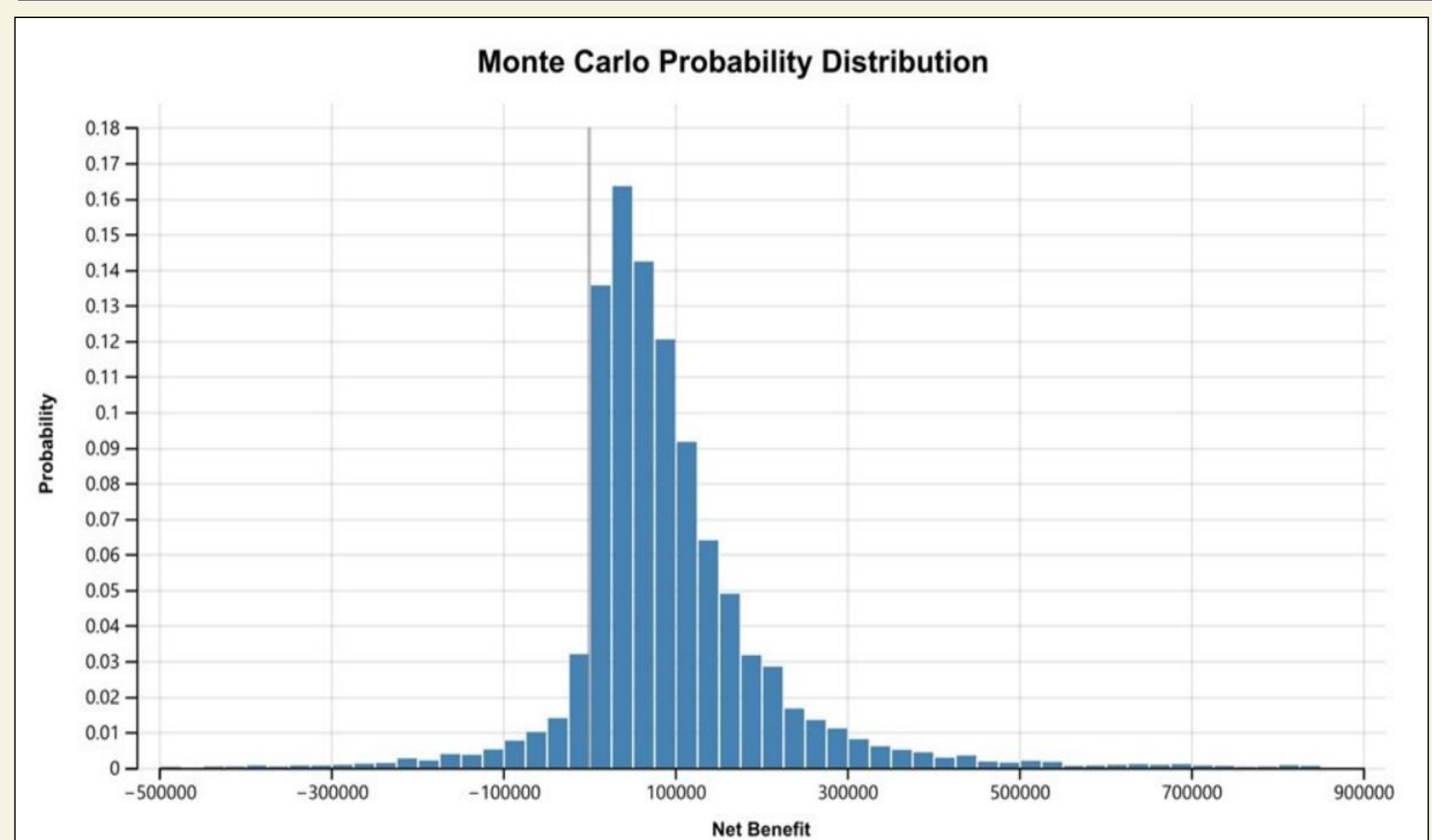
Cost Avoidance per Cause-based Domains in the PCNE Classification of DRPs

Primary domain	Cost avoidance (\$)
Drug selection	25,588.49
Dose selection	21,141.39
Patient transfer related (discrepancies)	20,623.2
Drug use process	2,777.12
Treatment duration	469.21
Drug form	114.30
Other	12,088.25
Total	83,052.34

Tornado Diagram



Probabilistic Sensitivity Analysis for the Net Benefit of Medication Reconciliation



Conclusions

Delivering a supplemented medication reconciliation service by a clinical pharmacist for CKD patients is cost beneficial from the healthcare perspective in Jordan, an example of a low- and middle-income country (LMIC).