

Early Conversion from Intravenous to Oral Antibiotics: Assessment and Evaluation of Economic Outcomes in Hospitalized Patients

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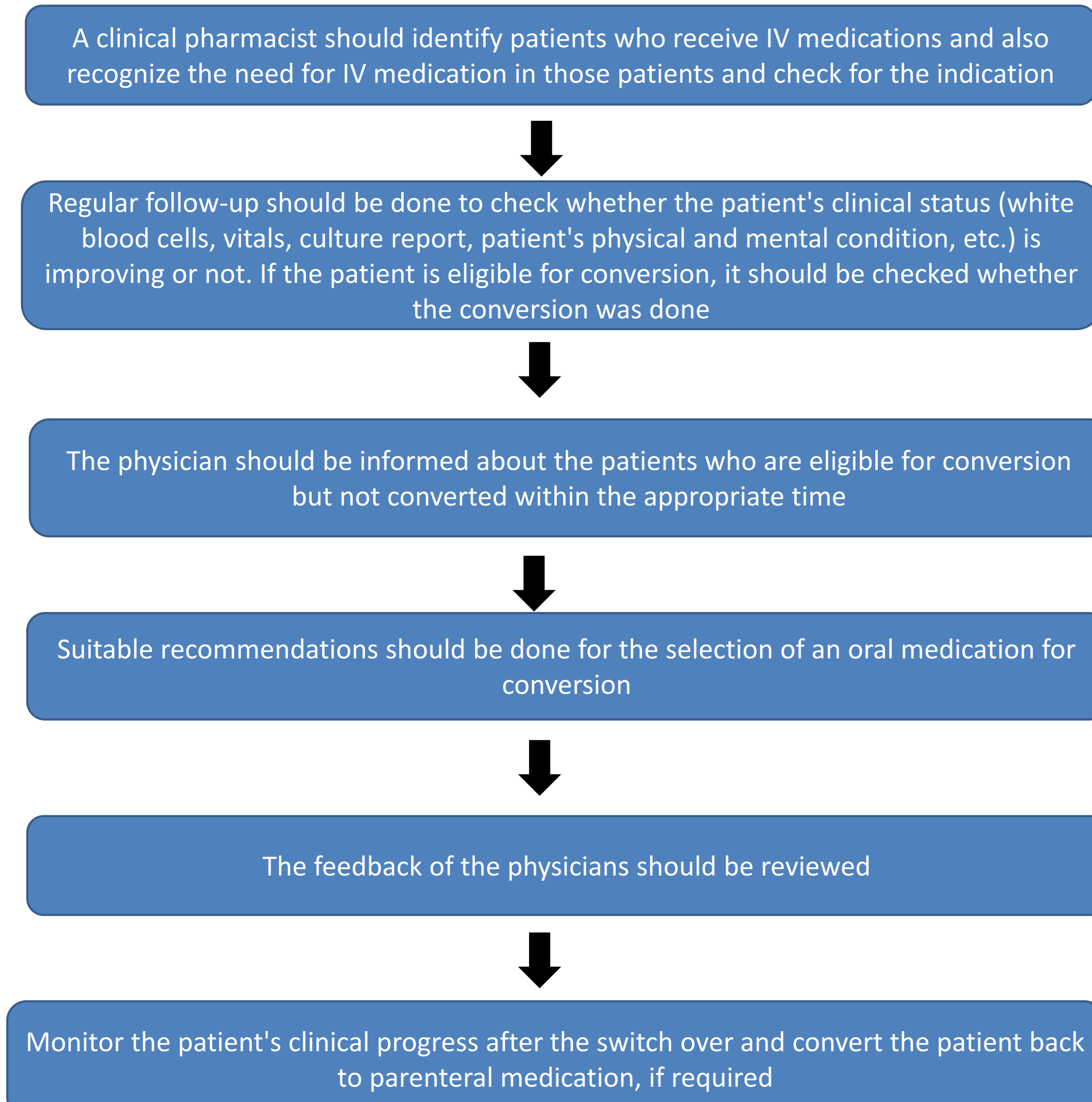
Introduction

- This study was conducted to evaluate the impact of intravenous (IV) to oral conversion of antibiotic therapy with respect to economic outcomes.
- To identify potential study subjects eligible for early conversion of antibiotics.
- To compare economic outcomes between phase 1 and phase 2

Methodology

- An Ambispective study was carried out in department of General Medicine at a tertiary care hospital.
- This study constitutes two phases, Phase I (retrospective phase) where IV to oral conversion was done before active involvement of the clinical pharmacist.
- Phase II (prospective interventional phase) consists of active involvement of the clinical pharmacist with recommendations for early conversion of IV to oral.
- The economic outcomes were compared between the two phases using cost-minimization analysis, cost burden analysis and decision tree analysis.

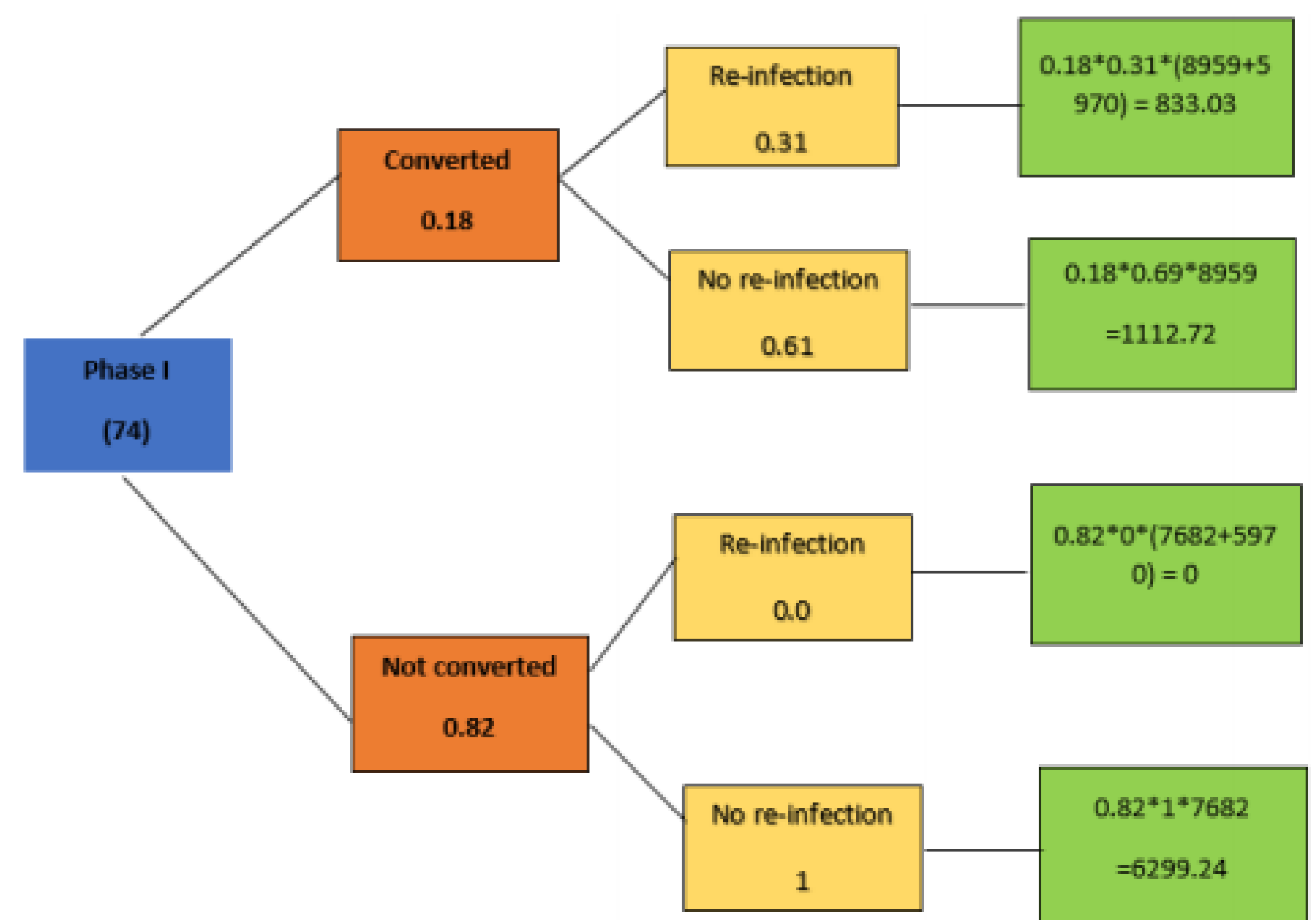
STUDY PROCEDURE



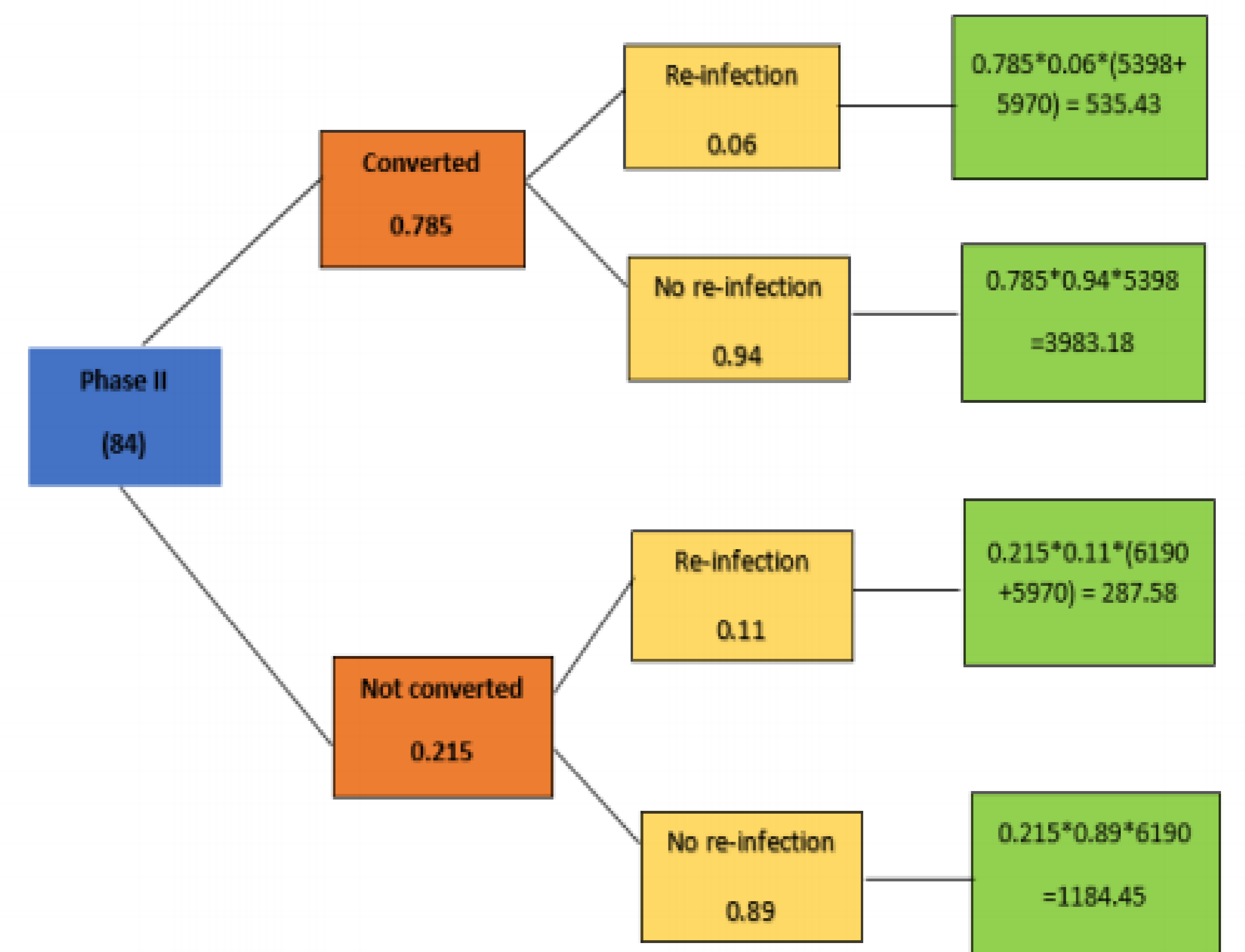
Results

- The mean cost of hospital stay was analysed in both phases and it was observed that there was a cost reduction of ₹2,118.51 (30.55 USD) in phase II when compared to Phase I.
- Decision tree analysis was done and total cost of re-infection in phase II was ₹5,990.64 (86.39 USD) in comparison to ₹8,244 (118.89 USD) in phase I.
- The cost incurred to patients was calculated using cost burden analysis and it was found to be ₹32,333 (466.27 USD) in phase I and ₹1,42,622 (2056.75 USD) in phase II. In contrast to phase II, an extra of 77 IV days were observed in phase I.

DECISION TREE ANALYSIS



Decision tree for Retrospective phase (Phase I)



Decision tree for prospective phase(Phase II)

Conclusion

- This study emphasizes that the practice of conversion from IV to oral antibiotic therapy has a considerable impact on economic outcomes amongst hospitalized inpatients.
- This study demonstrates a decrease in economic burden to patients if predefined switch criteria of IV to oral conversion are practiced meticulously.

Reference

- Chandrasekhar, D. & Pokkavayalil, V. 2019. Cost minimization analysis on IV to oral conversion of antimicrobial agent by the clinical pharmacist intervention. *Clinical Epidemiology and Global Health*, 7, 60-65.
- Davis, S. L., Mckinnon, P. S. & Delgado, G., Jr. 2005. pharmacoeconomic considerations associated with the use of intravenous-to-oral moxifloxacin for community-acquired pneumonia. *Clinical Infectious Diseases*, 41, S136-S143

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