

EE400: Economic Impact of Clinical Pharmacist Interventions in the Neonatal Intensive Care Unit in Qatar

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Background

- Around 1.5 million preventable adverse events per year have been reported in the United States, costing around 3.5 billion dollars
- Several studies have showed the important role of the pharmacist in reducing medication errors, shortening the duration of stay and the overall cost in different healthcare settings, including the intensive care units (ICUs)
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Objective

- To evaluate the economic impact of clinical pharmacist interventions in assessing treatment related problems among neonatal intensive care unit (NICU) patients in Qatar

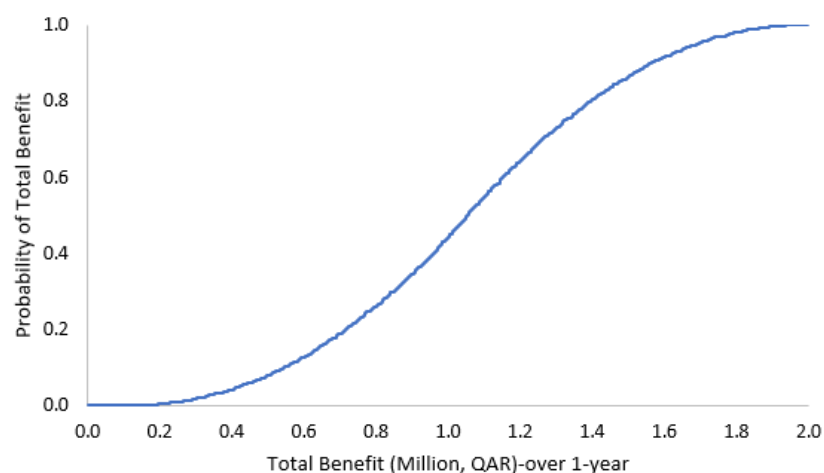
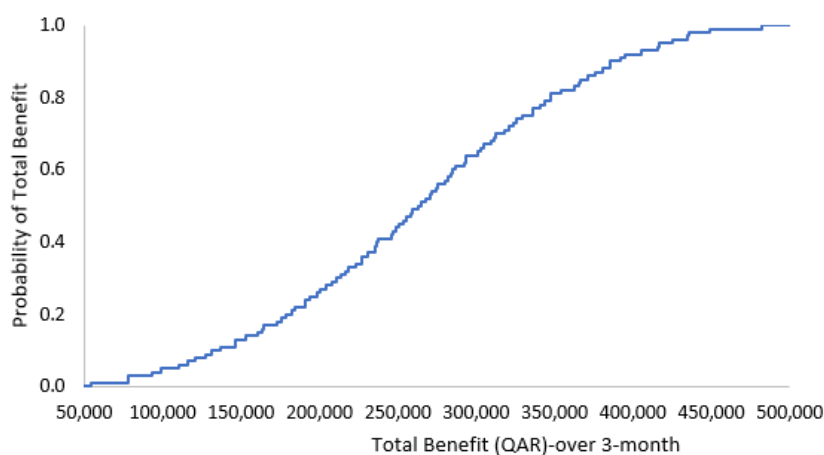
Methods

- The study was a retrospective review of clinical pharmacist interventions, defined as any action by a pharmacist that directly resulted in a change to patient management or therapy over 3-months period. The study was approved by the Medical Research Center, HMC (MRC-01-19-110).
- The study was conducted at the Women's Wellness and Research Center (WWRC) in HMC.

Methods (Cont.)

- The main outcome of this study was to evaluate the economic benefit associated with preventing ADEs through interventions by clinical pharmacists.
- The study was conducted from the perspective of the public WWRC hospital.

Figure 1. Probability curves



Results

- A total of 513 interventions for 150 patients were identified by the clinical pharmacists.
- Our analysis showed that the most common MRPs intercepted by the clinical pharmacists were related to dosing (63%), followed by appropriateness of therapy (29%)
- The overall cost saving was QAR 11,738 (US\$ 3,216)
- The overall cost avoidance was QAR 1,050,679 (US\$ 288,569)
- The total benefit over 3-month period was QAR 1,062,417 (US\$ 291,793)
- Multivariate sensitivity analysis the analysis showed that there is a 100% probability that the pharmacist intervention is associated with total benefit as in Fig. 1

Conclusion

- The clinical pharmacists in NICU result in cost saving. Increase and decrease in medications doses, discontinuation of inappropriate medications, and addition of another required medication were the most frequently implemented intervention



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