EE223: Economic Impact of Pharmacist Participation in Clinical Rounds at a General Tertiary Hospital in Qatar

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Background

- The irrational medicine use remains a serious public health problem worldwide.
- Bates et al. reported that the occurrence of ADEs in medical and surgical wards was 6.5% of total hospital admissions and 28% of them were adjudicated preventable.
- There are few studies that have evaluated the economic impact of clinical pharmacist interventions in specialized units, however studies that evaluated the economic impact of patients admitted to a tertiary general setting to evaluate the cost-benefit of preventable ADEs, which occur due to a medication error and result in any degree of harm are currently lacking.

Objective

- We sought to analyze the financial impact of clinical pharmacists' interventions over a 3-month period in an adult general tertiary setting in Qatar.

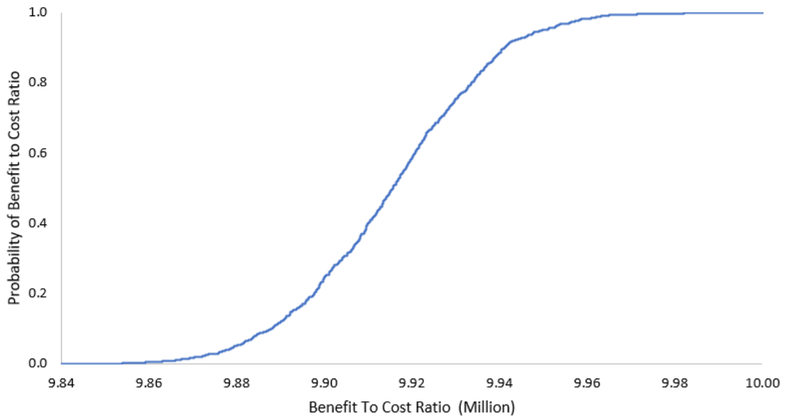
Methods

- 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-monts period. The study was approved by the Medical Research Center, HMC (MRC-01-19-110).
- The study was conducted at the HGH in HMC, the main provider of secondary and tertiary healthcare in Qatar.

Methods (Cont.)

- The targeted clinical pharmacist interventions in this study were based on those performed in patients admitted to HGH (internal medicine, emergency medicine, surgery, and critical care).
- 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 HGH hospital.

Figure 1. Benefit to cost ratio probability curve



Results

- A total of 852 interventions for 340 patients were identified by the clinical pharmacists.
- Our analysis showed that the most common MRPs intercepted by the clinical pharmacists were related to appropriateness of therapy (n= 541, 63.5%), followed by interventions related to dosing and administration (n= 287, 33.69%)
- The benefit-to-cost ratio was 9.33:1, which means that for every 1 QAR (USD 0.27) invested into clinical pharmacist, a QAR 9.33 (USD 2.56) of benefit is generate
- The net benefit over 3-month and 1-year were QAR 3,139,130 (USD 862,161) and QAR 12,556,520 (USD 3,448,646). Also, the total benefit over 3-month period was QAR 3,515,966 (USD 965,659)
- Multivariate sensitivity analysis the analysis showed that there is a 100% probability that the pharmacist intervention is associated with an >1 benefit to cost ratio as in Fig. 1

Conclusion

- The deployment of clinical pharmacists in general clinical wards is likely to prevent ADEs with significant economic benefits.

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