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Systematic review and meta-analysis of public hospital efficiency studies in gulf region and selected countries in similar settings

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The interest in assessment of hospital efficiency is growing globally and in the Gulf Cooperation Council countries (GCCs) in particular. The objective of this study was to review the literature on public hospital efficiency and synthesize the findings in GCCs and selected countries in similar settings. We systematically searched six electronic databases, in addition to references and grey literature, for studies that measured the efficiency of public hospitals in the selected countries. PRISMA-guidelines were followed in studies selection. We summarized the studies regarding samples, methods/technologies and findings, then assessed their quality. We meta-analyzed the efficiency estimates using Spearman-rank correlations and logistic regression to examine the internal validity of the findings. We identified and meta-analyzed 22 of 1128 studies. Four studies conducted in GCCs where eighteen from Iran and Turkey. The pooled technical-efficiency (TE) was 0.792 (SE±0.03). There were considerable variations in model specifications, analysis orientations and variables used in the studies that influenced the efficiency estimates. Also, the studies have missed points on quality appraisals with an average of 73%. The meta-analysis showed negative correlations between sample size and efficiency scores; the coefficient was -2.52 (CI: -5.3: 0.26; P value= 0.07) at 10% risk level. Also, choice of the model orientation in the studies has significantly influenced (82%) by their countries' income-categories, which was compatible with the strategic plans of these countries. The studies showed methodological and qualitative deficiencies limited their credibility. Our review suggested that the methodology and assumption choices have a high influence on the efficiency measurements. Additional efficiency research with high-quality data, different orientations and developed models is required in the GCCs. Considering the strategic plans, resource allocations and value for money in public-hospital assessments to establish evidence-based knowledge for the policy-decision making.

Biography

Ahmed Alatawi has Master of Science in Pharmaceutical Economics and Policy from Massachusetts College of Pharmacy and Health Sciences, with the specialties including economic evaluations, cost analysis micro-macroeconomics and health policy. He worked as assistant lecturer in Clinical pharmacy department, College of Pharmacy, Al-Jouf University, Al-Jouf, Saudi Arabia. Currently, he is continuing his research in Liverpool School of Tropical Medicine as PhD candidate.

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