Inpatient Case-mix Cost Vs Average Cost for Health Care Services in King Fahd Central Hospital, Saudi Arabia: A Comparative Study

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Abstract

Health care systems aim to deliver high-quality medical care while considering efficient resource usage and cost-effective forms of interventions. Such purposes require scientific tools or mechanisms which aid in cost assessment before the efforts of cost reduction are considered. Diagnosis-related groups based costing methodology (Case-mix) is considered one of the preferred costing approaches in the health care sector. King Fahd Central hospital Jazan, the only tertiary hospital in the Jazan region, was selected for case-mix system-based patient-level costing of health services. The study's objective was to estimate the cost per Diagnosis-Related Group (DRG) per inpatient admission and compare it with the already established average cost of health care services for inpatients. We applied a cross-sectional retrospective approach to categorize the inpatients based on their diagnosis and procedures and then estimate the actual cost of health care services provided to inpatients during 2018 and compared it with the average cost of the health services. There was a considerable difference between DRG-based costing (SAR 269,663,897) and average costing (SAR 247,035,938). The Diagnosis Related Group costing was found to be more reliable and representative of the services provided to the patients and is recommended to be used for reimbursement purposes.

Keywords

case-mix costing, average costing, health services costing, health economics, patient-level top-down costing, Saudi Arabia

Highlights

What do we already know about this topic?
We have already published two articles related to hospital services cost estimation.
How does your research contribute to the field?
In Saudi Arabia, the cost of health care services is not available, and this research will help establish a reimbursement system in hospitals.
What are your research's implications towards theory, practice, or policy?
It will help to establish a case-base payment system and reimbursement policy at public hospitals.

Introduction

Hospitals are multiproduct organizations that provide a wide range of services of variable quality and cost. They also house some of the costliest operational units in the health care system which utilize ample resources to deliver the kind of services they are purposed to do so.[1] A significant effort is required to limit the cost of health services. But it poses a challenge to determine what services need to be selected for cost cutting or what departments or units need to be looked at, in terms of minimizing the resource spending.[2] Besides, variations in output, size, service, quality, and efficiency substantially affect hospital services costing.[3] The cost assessment of services will be vital as it plays a critical role in enhancing hospital productivity, resource distribution,

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