

ABSTRACT

THE BUILDING AND IMPLEMENTATION COST VARIABLE OF HOSPITAL INFORMATION SYSTEM: A SYSTEMATIC REVIEW

Objectives: Medical errors and health-care adverse events are one of the major leading cause of deaths in many countries. A Hospital Information System (HIS) is a useful tool to improve medical care and decreasing medical errors. The objective of this study is to conduct a systematic review of the literature on the costing components and the cost's amounts in building and implementing a HIS.

Methods: To identify relevant studies, PUBMED, Sciencedirect, Ebscohost and ProQuest was searched up to November,2017. Data extracted included papers that mentioning the costs of building or implementing HIS. Data excluded were papers that weren't explained the costs or were conducted outside hospital setting.

Results: Following a screening of 2,478 papers, 35 full-text manuscripts were included. Topics addressed included: cost of implementing HIS; cost's components such as: cost of software and hardware, cost of personnel, cost of maintenance; barriers in implementing HIS, benefits of HIS included: cost-effectiveness and return on investment (ROI).

Conclusions: It was difficult to draw a meaningful estimate for the cost of building and implementing a HIS due to considerable heterogeneity. Cost's components varied between hospitals depending on the scale and complexity of the system.

Keywords: Hospital information system, electronic medical record, implementation, cost.