A CM-BASED PREVENTION MODEL FOR IS PROJECTS IMPLEMENTATION FAILURE IN MALAYSIAN GOVERNMENT HOSPITALS

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ABSTRAK

Hospital kerajaan di Malaysia telah menggunapakai sistem maklumat (IS) sebagai pemangkin dalam menyediakan perkhidmatan yang lebih baik kepada orang ramai. Walau bagaimanapun, sebahagian daripada pelaksanaan IS menghadapi pelbagai cabaran seperti rintangan pengguna untuk berubah, pengguna tidak sedar betapa pentingnya sistem berkenaan, dan kekurangan sokongan dan pemantauan daripada pengurusan pertengahan dan pengurusan atasan. Akibatnya, ia gagal dilaksanakan dengan jayanya. Kajian awal mendapati tiada garis panduan dalam melaksanakan IS di hospital kerajaan di Wilayah Utara Malaysia. Oleh itu, kajian ini mengkaji faktor kegagalan pelaksanaan IS di hospital dan membina model pencegahan yang menggabungkan Pengurusan Perubahan (CM). Satu kajian literatur dan temu bual telah dijalankan. Faktor Kegagalan Kritikal (CFFs) pelaksanaan projek IS dan tiga model CM (model CM Lewin, model CM Kotter dan model ADKAR Prosci) telah dikenalpasti. Personel utama yang mewakili pengurusan tertinggi, pengamal IT dan pengamal perubatan daripada empat hospital kerajaan yang terpilih di Wilayah Utara Malaysia terlibat dalam pengumpulan data. Model pencegahan yang berasaskan CM telah dibangunkan berdasarkan CFFs yang telah dikenalpasti dan tiga model CM. Teknik Delphi digunakan untuk menilai model yang dicadangkan, melibatkan pakar domain dari hospital yang dipilih. Tiga puluh enam CFFs telah dikenalpasti yang dikategorikan kepada empat kategori utama; isu manusia, isu teknologi dan infrastruktur, limitasi perisian, dan isu sokongan. Model pencegahan yang dicadangkan dibahagikan kepada tiga sub-fasa Pelaksanaan; Pra-Pelaksanaan, Semasa-Pelaksanaan dan Pasca-Pelaksanaan. Model yang dicadangkan diyakini dapat memberi manfaat kepada pengurusan tertinggi, pengamal IT dan pengamal perubatan bagi mencegah kegagalan pelaksanaan projek IS di hospital kerajaan di Malaysia.

Kata kunci: projek IS, kegagalan pelaksanaan, model pencegahan, Pengurusan Perubahan, Faktor Kritikal Kegagalan (CFFs)

ABSTRACT

Malaysian government hospitals have adopted information system (IS) as an enabler in providing a better service to public. However, some of the IS implementations are facing many challenges such as users' resistance to change, users did not realize the importance of the system, and lack of support and monitoring from the middle managers and top management. Consequently, it failed to be implemented successfully. Preliminary studies revealed that there is no guideline for IS implementation in government hospitals in Northern Region of Malaysia. Hence, the study investigates the failure factors of IS implementation in hospital and construct a prevention model which incorporates Change Management (CM). An extensive literature review and interviews have been conducted. Critical Failure Factors (CFFs) of IS projects implementation and three CM models (Lewin's CM model, Kotter's CM model and Prosci's ADKAR model) have been identified. Key persons representing top management, IT practitioners and medical practitioners from four selected government hospitals in Northern Region of Malaysia were involved in data collection. A CM-based prevention model was constructed based on the identified CFFs and three CM models. Delphi technique was used to evaluate the proposed model, involving domain experts from the selected hospitals. Thirty-six CFFs have been discovered which have been categorized into four main categories; human issues, technology and infrastructure issues, software limitations, and support issues. The proposed prevention model is divided into three sub-phases of Implementation; Pre-Implementation, During-Implementation, and Post-Implementation. The model is believed to be beneficial for top management, IT practitioners and medical practitioners in preventing IS implementation failure among government hospitals in Northern Region of Malaysia.

Keywords: IS projects, implementation failure, prevention model, Change Management, Critical Failure Factors (CFFs)

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CHAPTER ONE

INTRODUCTION

This chapter explains the overview of the study, problem statement, research questions, research objectives, significance of the study, contributions and the scope of the study.

1.1 Overview of the Study

Malaysian Government has adopted ICT as an enabler in providing a better service to the public across various departments and agencies. This effort not only has invested a big amount of money on hardware and infrastructure, but also on application development in order to manage information efficiently and effectively.

In managing information to offer a better quality of health to the public, a variety of information system (IS) applications have been introduced in Malaysian government hospitals which covers several aspects of work processes. However, IS implementation in hospital is very challenging because hospital is a very sensitive environment which deals with patient's life (Abouzahra, 2011). There are numerous systems and devices that the medical practitioners (e.g. doctors, nurses, radiologist, scientists) need to work with, while the integration between the systems is very important because the failure may result in serious harm to patients as in providing suitable treatment and prescribing precise medicine to the patient (Abouzahra, 2011).

Some of the applications that have been implemented in hospitals are Teleconsultation (TC), Hospital Information System (HIS), Pharmacy Information

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