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STUDIES OF EHR IMPLEMENTATION
AND OPERATION IN DIFFERENT
COUNTRIES WITH PARTICULAR
REFERENCE TO SAUDI ARABIA

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Abstract

Electronic Health Records (EHRs) have led to a significant transformation in the healthcare sector. EHRs have improved the nature of healthcare delivery in the various healthcare organizations. While recognizing the changes in healthcare sector, this thesis studied the implementation and the use of EHRs in four developed countries, the United State (US), United Kingdom (UK), Australia and New Zealand and one developing country, Saudi Arabia. By employing primary and secondary literature, EHR's benefits, challenges, success factors as well as lessons for developing countries were identified.

The implementation of the EHRs in the ambulatory care was almost universal in the UK, Australia and New Zealand (each >90%), except the US which is lagging behind (46%). The low rate of EHR adoption in the US was attributed to factors such as lack of requirements imposing the use of computers in medical practises. Although, there is no good data for the use of EHRs in hospitals in the studied countries, EHR use remains uncommon in hospital settings. The use of EHRs in Saudi Arabia is uncommon; however several projects have been established by the government of Saudi Arabia to increase the awareness of such technologies as well as to develop strategies for implementing EHRs. Saudi Arabia and other developing countries should learn the best practices from developed countries and that it is important that they come up with initiatives and legislations to support the implementation of EHRs.

Currently, all of the studied countries set the implementation of a national EHR as a priority in their healthcare system reform. Two approaches for the presentation of national EHR database were identified in the developed countries; centralised or distributed.

While EHR provides various benefits to clinicians, patients and healthcare managers, its implementation poses many challenges such as confidentiality, privacy, security, lack of standards, start-up cost and content of discharge summary. To achieve successful implementation of EHRs, factors such as leadership, organization structure, goals, visions, communication, organization culture and workflow redesign should be considered.

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Abbreviations

AMCs	Academic Medicines
CDR	Clinical Data Repository
CMWF	Commonwealth Fund
CPOE	Computerized Physician Order Entry
DCR	De-tailed Care Record
DHBs	District Health Boards
eDS	Electronic Discharge Summary
EHRs	Electronic Health Records
GPs	General Practitioners
HIMSS	Health Information Management Systems Society
HIPAA	Health Insurance Portability and Accountability Act
HMOs	Health Maintenance Organisations
HRQA	Healthcare Research and Quality Agency
ICTs	Information and Communication Technologies
IOM	Institute of Medicine
LIMS	Laboratory information management systems
MOH	Ministry of Health
NCVHS	National Committee on Vital and Health Statistics
NHI	National Health Index
NHS	National Health Service
NPfIT	National Programme for Information Technology
PIHI	Privacy of Individually Identifiable Health Information
RIS	Radiology Information System
SCR	Summary Care Record