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

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By:
Yaser Abdulaziz Alsahafi
Supervisor: Professor Tony Norris

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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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# Table of Contents

**Acknowledgements** ........................................................................................................ iii  

1 **Introduction** ............................................................................................................... 1  
1.1 Health Records ........................................................................................................... 1  
1.2 History of Health Records ......................................................................................... 1  
1.3 Paper Based Records ............................................................................................... 2  
1.4 The Need for a New Approach .................................................................................. 3  
1.5 Electronic Health Records ....................................................................................... 4  
1.6 Research Objectives and Research Questions ......................................................... 4  
1.7 Rationale for the Study ............................................................................................. 5  
1.8 Structure of the Research Report .............................................................................. 5  

2 **Literature Review** ....................................................................................................... 6  
2.1 Definitions of Electronic Health Records ................................................................. 6  
2.2 History of Electronic Health Records ...................................................................... 7  
2.3 Value of Electronic Health Records to Academic Medicines .................................. 11  
2.4 Key Components of Electronic Health Records ...................................................... 12  
2.4.1 Administrative System Components .................................................................... 13  
2.4.2 Laboratory System Components .......................................................................... 13  
2.4.3 Radiology System Components .......................................................................... 14  
2.4.4 Pharmacy System Components .......................................................................... 15  
2.4.5 Computerized Physician Order Entry .................................................................... 15  
2.4.6 Clinical Documentation ....................................................................................... 16  
2.5 System Integration ..................................................................................................... 17  
2.5.1 Presentation Integration ........................................................................................ 17  
2.5.2 Data Integration ................................................................................................... 18  
2.6 Consideration of Standards ...................................................................................... 19  
2.6.1 Definitions ........................................................................................................... 20  
2.6.2 Key Standards .................................................................................................... 20  
2.7 Benefits of Implementing EHRs .............................................................................. 22  
2.7.1 Clinicians ............................................................................................................. 22  
2.7.2 Healthcare Managers ........................................................................................... 23  
2.7.3 Patients ................................................................................................................ 24
6 The Implementation of EHRs in Australia .......................................................... 58
6.1 The Healthcare System in Australia................................................................. 58
6.1.1 Coverage ................................................................................................. 59
6.1.2 Finance .................................................................................................... 59
6.2 Developments of Health Information Management in Australia .................. 60
6.3 Implementing EHRs ....................................................................................... 62
6.3.1 Australian’s EHR Model ........................................................................ 63
6.3.2 EHRs in Ambulatory Care ...................................................................... 63
6.3.3 EHRs in Hospitals .................................................................................. 64
6.4 Healthcare ICTs Issues ................................................................................ 64
6.5 Summary ...................................................................................................... 67

7 The Implementation of EHRs in New Zealand ............................................... 68
7.1 The Healthcare System in New Zealand ......................................................... 68
7.1.1 Coverage ................................................................................................ 68
7.1.2 Finance ................................................................................................... 69
7.2 Developments of Health Information Management in New Zealand ........... 71
7.3 Implementing EHRs ....................................................................................... 74
7.3.1 New Zealand’s EHR Model ................................................................... 74
7.3.2 EHRs in Ambulatory Care ...................................................................... 75
7.3.3 EHRs in Hospitals .................................................................................. 76
7.4 Healthcare ICTs Issues ................................................................................ 76
7.5 Summary ...................................................................................................... 79

8 The Implementation of EHRs in Saudi Arabia .............................................. 81
8.1 The Healthcare System in Saudi Arabia ......................................................... 81
8.1.1 Coverage ................................................................................................ 82
8.1.2 Finance ................................................................................................... 83
8.2 Developments of Health Information Management in Saudi Arabia ........... 84
8.3 Implementing EHRs ....................................................................................... 86
8.4 Healthcare ICTs Issues ................................................................................ 87
8.5 Summary ...................................................................................................... 89

9 Discussion ........................................................................................................ 91
9.1 Paper-based and Electronic-based Record Comparison ................................... 91
9.2 EHR Technology ........................................................................................... 93
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.3</td>
<td>Healthcare System Comparison</td>
<td>96</td>
</tr>
<tr>
<td>9.3.1</td>
<td>Structure</td>
<td>96</td>
</tr>
<tr>
<td>9.3.2</td>
<td>Coverage</td>
<td>97</td>
</tr>
<tr>
<td>9.3.3</td>
<td>Finance</td>
<td>98</td>
</tr>
<tr>
<td>9.4</td>
<td>EHR Implementation Comparison</td>
<td>99</td>
</tr>
<tr>
<td>9.5</td>
<td>The Benefits and Challenges of EHR Implementation</td>
<td>102</td>
</tr>
<tr>
<td>9.6</td>
<td>Centralized vs. Distributed Approach in Implementing EHRs</td>
<td>104</td>
</tr>
<tr>
<td>9.7</td>
<td>Critical Success Factors in Implementing EHRs</td>
<td>107</td>
</tr>
<tr>
<td>9.8</td>
<td>Lessons for Developing Countries, Saudi Arabia</td>
<td>110</td>
</tr>
<tr>
<td>10</td>
<td>Conclusions</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td>115</td>
</tr>
</tbody>
</table>
List of Tables

Table 1: Different levels of EHR implementation among GPs in the US ........................................... 42
Table 2: Different levels of EHR implementation among GPs in UK............................................... 54
Table 3: Different levels of EHR implementation among GPs in Australia..................................... 64
Table 4: Different levels of EHR implementation among GPs in New Zealand............................... 76
Table 5: Budget appropriations for the MOH in Saudi Arabia, 2005–09....................................... 84
Table 6: Paper based and electronic records ..................................................................................... 92
Table 7: Different levels of EHR adoption among GPs across the US, UK, Australia and New Zealand ........................................................................................................................................... 100

List of Figures

Figure 1: Electronic health data ........................................................................................................ 12
Figure 2: Presentation level of integration ....................................................................................... 18
Figure 3: Data integration models .................................................................................................. 19
Figure 4: Total health expenditure in the US (%GDP) .................................................................... 35
Figure 5: Two estimates of EHR diffusion ...................................................................................... 39
Figure 6: The share of office-based physicians with EHR ............................................................... 41
Figure 7: Changes in EHRs adoption rate from 2008 to 2009 ....................................................... 43
Figure 8: Total health expenditure in UK (%GDP) ........................................................................ 50
Figure 9: Total health expenditure in Australia (%GDP) ............................................................... 60
Figure 10: Total health expenditure in New Zealand (%GDP) ...................................................... 70
Figure 11: Total health expenditure in Saudi Arabia (%GDP) ....................................................... 84
Figure 12: Total expenditure on healthcare by the five countries ................................................. 99
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