Chapter 1.27

# A Comparison of How Canada, England, and Denmark are Managing their Electronic Health Record Journeys

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## ABSTRACT

Healthcare is one of the world's most information-intensive industries. Every day, volumes of data are produced which, properly used, can improve clinical practice and outcomes, guide planning and resource allocation, and enhance accountability. Electronic health information is fundamental to better healthcare. There will be no significant increase in healthcare quality and efficiency without high quality, user-friendly health information compiled and delivered electronically. The growing use of information and communication technology (ICT) in the healthcare sector has introduced numerous opportunities and benefits to patients, providers and governments alike. Patients are being provided with tools to help them manage and monitor their healthcare, providers are able to seamlessly access up-to-date patient information, and governments are showing transparency to the public by reporting health data and information on their websites. There is mounting evidence that national, regional, and organizational e-health strategies are being developed and implemented worldwide. This chapter provides an overview of three different national e-health strategies, and identifies the lessons learned from the e-health strategies of Canada, England and Denmark.

## INTRODUCTION

Due to the ever increasing pressures and demands for healthcare services and the strain those services put on the economy, many nations have realized that they must develop a more sustainable, efficient and effective healthcare system. In doing this, there has been much investment in ICT. Information systems play a significant role in helping improve health outcomes and decision-making at the point of care, and the benefits don't stop there. There are a number of global themes that emerge regarding

*Table 1. Global themes in health information systems*

| Theme | Deliverables and Challenges |
|---|---|
| Electronic Health Records (EHRs) | • Conveys clinical information<br>• Coordinates care for particular diseases or services<br>• "Virtual concept" reliant on the network approach<br>• Pulls data from multiple stores |
| Decision Support Tools | • Supports clinician decision making at the service (planning, peer reviews) and care level (care plans, individual clinical actions)<br>• Uses include:<br>     o Computerized Physician Order Entry (CPOE)<br>     o Computerized Nurse Order Entry (CNOE)<br>     o E-Prescribing<br>     o Formularies |
| Unique Patient Identifiers | • Enable EHRs to span across the continuum of care<br>• Manages patient visits and person data |
| Connectivity | • Online access demands create a need for greater bandwidth<br>• Addressing security demands in order to ensure patient information is secure |
| Common Standards and Minimum Data Sets | • Detailed data sets lack consensus within and across countries<br>• Consistent and standardized reporting is lacking, worldwide |
| Coordination of Care in General Practice | • Growing use of more sophisticated practice management systems<br>• Opportunities for greater functionality including clinical uses<br>• Individual care plans are supported<br>• Increasing number of electronic interactions<br>• Supports the global trend to focus on primary care as the main focus of health service delivery<br>• IT vendors are focusing more research and development budgets in this area |
| Telehealth | • Delivers community and home-based services remotely<br>• Potential to provide specialist services to rural and disadvantaged communities, from a distance<br>• Opportunity to deliver care, monitor and manage chronic conditions remotely via the internet<br>• Devices available for home use to capture vital signs and transmit to the care provider |
| Consumer Involvement | • Consumers are making informed decisions<br>• Demand for health information and knowledge<br>• Available information should be integrated into service delivery to better involve consumers<br>• Demand for individually tailored care |
| Access | • Demands on the healthcare system has resulted in various initiatives which allows consumers access to the most appropriate care provider<br>     o Call centers, knowledge bases, nurse-based telephone triage |

the use of health information systems (Table 1). These themes include establishing electronic health records, developing clinical decision support tools and introducing Telehealth services to those in remote and rural areas often with a high incidence of chronic disease. Orchestrating the change from the paper-based world, to one with seamless and fluid information systems requires a great amount of coordination, time and funding and most importantly a comprehensive strategy.

The impact of the electronic health record (EHR) on patient care can be quite substantial (Infoway, 2006). Some of the potential benefits include:

• Improved communication between providers, and between providers and patients. In many countries, the flow of information has grown exponentially.

• In a number of countries, the implementation of the EHR among various professions has created momentum for working in teams. The EHR has been a catalyst for accelerating this key element of healthcare

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