### Social Impacts of e-Health in Norway

Matthew Quinn, Letterkenny Institute of Technology, Letterkenny, Ireland Nigel Mckelvey, Letterkenny Institute of Technology, Letterkenny, Ireland

#### **ABSTRACT**

Norway spends more on public healthcare per person than any other European country. The government and the Norwegian health authorities are committed to improving the country's healthcare service through the use of innovative information and communication technology, generally referred to as ehealth. Society in Norway benefits from an integrated ehealth care system where the patient is at its centre regardless of the person's level of income or geographical location. The long-term national ehealth strategy "one citizen – one record" is the basis for all ehealth national strategies and initiatives. With its challenging geographical environment and ageing population, telemedicine and other ehealth developments such as eprescription and electronic health records (EHR) are important tools in successfully implementing new ehealth reforms that continue to impact society in Norway.

#### **KEYWORDS**

e-Health, Electronic Health Record, e-Prescription, Health Technology, Telemedicine

#### INTRODUCTION

Technology, Innovation and Sciences are generally viewed as the drivers of economic growth and progress in today's world. Technology has radically changed society and the internet and web services are transforming the way we communicate with each other and how we interact socially and search for information. Developments in information and communication technology (ICT) have revolutionized how goods and services are supplied and Norway is one of the EU countries leading the field in embracing their developments to enhance its health and social care services.

The use of electronic information and communication technology to promote health or improve healthcare can be referred to as eHealth. This technology includes electronic health records (EHR) that integrate patient medical data and allow the data to be shared across healthcare systems more efficiently. Telemedicine is used by healthcare professionals to evaluate, diagnose and treat patients living in isolated or rural areas using telecommunication technology (Intel 2014).

### **Background**

The Norwegian Centre for E-health Research (2018) was created on 1st January 2016, with an objective of contributing to a common and national ICT solution for health and care services. The centre endeavored to achieve a solution to the following problem areas:

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- Health professionals should have easy and secure access to patient and user information;
- The public should have access to simple and secure digital services;
- Data should be available for quality improvement, health monitoring, management and research.

Norway is one of the leading eHealth countries in the world and the health status of its people is testament to the efficiency of its healthcare services. The Norwegian government is committed to eHealth and to its development. Information technology is used as a tool for making public services better, more efficient and more accessible for everyone. The health and care sector in Norway strives to improve the quality of life of its citizens by promoting integrated care between healthcare services and professionals whilst having the patient at the centre.

Norway's low density population (13 per square kilometre) is approximately 5 million in total and its expenditure on health and social care is 9.9% of its Gross Domestic Product (GDP) making it one of the European countries with the highest level of public spending on health per capita (Romøren et al. 2011).

At present Norway has in comparison to other EU countries, a very developed eHealth structure due to its continuous action plan development and the setting of objectives.

#### Overview of Healthcare

The underlying principle supporting the Norwegian healthcare system is that all citizens should have equal access to health services, regardless of their economic or social status or their geographical location.

The Ministry of Health and Social Affairs is responsible for governmental policy on healthcare services in Norway and it has the responsibility for providing good and equal healthcare services for the people of Norway. Norway has a mainly public healthcare sector where every citizen has access to healthcare services paid for by the state. Hospital care for inpatients is free of charge and out-patient treatment and prescription drugs up to a limit. There are approximately 85 hospitals in Norway, each owned by the central government. Five main regional health enterprises have been set up to support the healthcare system.

The Norwegian Directorate of eHealth was established in 2016 as the government agency responsible for developing and administrating standards in electronic collaboration for health and care services in Norway. Norway's National eHealth Strategy is "One Citizen – One Health Record". Medical information from various Health registries can be integrated for the purpose of research based on informed consent (Task Force Health Care 2017).

#### Strategies for IT Development

The Directorate for Health is committed to eliminating socioeconomic inequalities in health. To address this, one of its aims is to promote ways of increasing healthcare knowledge and awareness in the Norwegian population.

Information Technology has been used as a tool to improve health and care services for many years. In 1997, the Ministry of Health and Social Affairs released the action plan "More health for each bIT" which was the first national action plan for IT development in the health and social sectors. In 2001 a second action plan was released called "Say @!". The aim of this plan was to achieve widespread use of electronic communication at all levels in the health and social services sector. A third plan called "Teamwork 2007" further promoted the use of electronic collaboration between the health services and a call for further improvement in the quality of services (Vassilakopoulou et al. 2017).

#### **Universal Health**

The 2015 WHO global survey on eHealth examined how eHealth could be used in support of universal health coverage. The aim of universal health coverage is to ensure that everyone, everywhere has

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