Strategic Alignment and E-health Governance

E-health is important because health is one of the most important things for every human being. Current health care models are not sustainable, and, hence, there is a need to find more efficient ways to achieve better health across the entire population for years to come.

From the health care service perspective, e-health plays an essential role. It is perceived as crucial for high-quality and cost-effective health care. It is faster, provides more and better information (when and where it is needed), reaches remote areas of the population and is secure. In short, e-health promises to be a great solution to the current sustainability issue.

Conversely, getting the expected benefits from e-health has been difficult to demonstrate. This is the point where e-health governance can help in achieving expectations.

There has been rising interest in adopting e-health governance frameworks to obtain reassurance that investments return the expected results in health care. However, how e-health governance is implemented within health care is poorly understood; equally misunderstood is the actual impact e-health governance has on linking health care structures and resources with local and national health care strategies—in other words, in achieving strategic alignment.

This article introduces a recent comprehensive technical report on e-health governance. The report explores the application of well-known frameworks (e.g., COBIT® and ITIL) within the National Health Services (NHS) in Scotland and their impact on e-health governance maturity and strategic alignment with health care. The report mainly presents results of a longitudinal study conducted since 2008 within Scottish health care organisations, but also offers cross-national and cross-sectoral benchmarking.

As a result, it offers an adapted and simplified instrument to swiftly measure e-health governance and strategic alignment maturity levels.

The conclusions of the study suggest that there is a potential strong statistical correlation between e-health governance and strategic alignment; however, more data are required to confirm the initial findings. Thus, it is recommended that the longitudinal analyses continue over the coming years to determine the actual correlation ratio. Further research is also required to understand the influence the rest of the strategic alignment model (SAM) dimensions have and to determine how e-health governance influences strategic alignment in isolation of the rest of the SAM dimensions.

For this purpose, a simplified and adapted method to monitor these trends in future health care organisations (HCOs) is also provided.

**WHAT IS BUSINESS-TO-E-HEALTH STRATEGIC ALIGNMENT?**

Business-to-e-health strategic alignment follows the model proposed by Henderson and Venkatraman. This model has been extensively used in business management, including Luftman’s experiences within Fortune 500 companies.

Business-to-e-health strategic alignment refers to applying IT within health care in harmony with the HCO’s strategies, goals and needs. Achieving alignment maturity involves IT and HCO strategies evolving jointly, in an integrated way and in harmony.

**WHAT IS E-HEALTH GOVERNANCE?**

There is not unanimous consensus on what e-health is, nor what governance entails; however, for the purpose of this article, e-health governance is defined as the act of governing e-health, which involves decision making as well as e-health management.

Beyond this concept, governance is also the art of assurance, which becomes relevant because of the need for greater results accountability in the best interest of all health care stakeholders.

The World Health Organization (WHO) defines e-health in terms of the efficiency of using information and communication technologies (ICT) in health care, whilst the European Commission (EC) defines e-health more broadly as “the use of modern information and communication technologies to meet needs...
of citizens, patients, healthcare professionals, health care providers, as well as policy makers."

In a survey, 93 random individuals in a hospital were asked about how they identify themselves with five e-health vision statements. Sixty-one percent identified e-health with empowering patients and health care professionals to link devices and technologies towards the personalised medicine of the future—integrating smarter, safer and patient-centred e-health services into the patient’s life.

Nineteen percent thought of e-health as helping people realise their best possible health through digital technologies. Ten percent suggested e-health will, through the active engagement of patients and health and social care professionals, provide innovative technology at the point of demand. With enthusiasm, e-health will support and deliver accessible solutions that will facilitate secure access to relevant and accurate information in order to provide the best quality of care and improved health.

Another 10 percent suggested e-health is a way for establishing innovative health care in the region (in this case, Scotland) for the 21st century.

E-health has different connotations, but for the purpose of this article, it is defined as presented by eHealth Industries Innovation Centre (eHI²) Swansea University (Wales, United Kingdom), because of the express mention to the association between e-health and people living in digital societies:

E-health is a different way of pursuing healthy lives. E-health implies people living in digital societies using information and communication technologies in favour of better health: health care professionals, patients and care givers, as well as citizens involved in their own or their family’s health care.

As stated earlier, e-health is important as it is a potential solution for the sustainability of future health care systems. There is an expectation in digital societies that ICT will contribute to better health care. It is expected that e-health innovations contribute to providing quality and cost-effective solutions for 21st century health care challenges, especially considering aging populations, increasing long-term conditions, obesity and alcohol-related issues, along with the costs of preventable hospital admissions if prescription medications were taken correctly. Furthermore, e-health is considered key to achieving sustainable health care, especially in collaborative cross-border spaces.

Despite e-health being considered key for sustainable health care, many e-health initiatives have failed, and HCOs commonly find themselves caught between the organisational pressures for delivering e-health and organisational resistance to new ways of functioning.

Success with implementing e-health initiatives varies significantly according to experiences, as reported to the NHS. Some of the downsides are related to delays, over expenditures or budget deficits, poor quality of outcomes, and effectiveness on health care, which are consistent with the average ICT project’s implementation statistics.

After a series of disappointing e-health implementations, there is rising interest in e-health/IT governance as a vehicle to provide assurance to all stakeholders to whom e-health programmes deliver the expected benefits. This interest also derives from the appearance of greater pressures in HCOs for compliance with best practices, standards and regulations.

It is expected that interest will continue rising in the coming years since investments on e-health continue to grow at an average rate of 12-16 percent per year and a global e-health market worth an estimated US $23 billion is expected by 2017. Despite this, and the expectations of successful e-health implementations at strategic levels in health care organisations, e-health governance is still very much just a chief information officer (CIO)/IT director issue. This is a widely reported international occurrence.

Governance is, in essence, the act of governing, which involves decision making, as well as management. Beyond this concept, governance is also the art of assurance, which becomes relevant because of the need for greater results accountability in the best interest of all health care stakeholders.

THE VALUE OF E-HEALTH GOVERNANCE

Is it worth spending time, resources and efforts on e-health governance? For some, common sense suggests a clear yes as a response; for others, it is not as clear because implementing e-health governance good practices, frameworks and standards requires time, resources and huge transformational efforts in most HCOs.

The results of the study (available in the ISACA® Knowledge Center at www.isaca.org/monitoring-progress-on-ehealth) support conclusions on how immature organisations are in this matter.
Although there is a considerable amount of research work on implementation of e-health initiatives and e-health governance, this is still described as a ‘young science’, demanding more understanding of implementation processes, tools and models for better results. There are a number of IT governance frameworks used across sectors and industries, commonly COBIT, ITIL and a range of ISO standards (e.g., ISO9000, ISO17799 and ISO 38500)—the first two being the most commonly adopted within the health care sector.

USING FRAMEWORKS FOR E-HEALTH GOVERNANCE

The research discussed here is a continuation of a previous study conducted between 2005 and 2010, which involved:

• A comprehensive literature review
• A Delphi exercise proposing a causal model of determining factors involved in the adaptation of NHS to the digital society with a particular focus on Scotland

This model identified a number of factors to be understood in order to help organisations and governments make better e-health investment decisions and strategies (figure 1). This article and the related technical report (www.isaca.org/monitoring-progress-on-ehealth) focus on two of the main factors identified in the causal model: e-health governance and e-health strategic alignment.

The study started in 2008 as part of an IT governance project cosponsored by the Scottish Executive to demonstrate practical results in adopting IT governance best practices and to provide recommendations for a future adoption across the NHS in Scotland. Three representative NHS boards in Scotland were selected for this trial.

The technical report is based on a longitudinal study (2008-2013), involving a multicase analysis of three representative health care organisations in Scotland.

A combination of empiric methods has been used: semi-structured interviews with implementers, surveys using an adaptation to health care of Luftman’s instrument for assessing Venkatraman’s SAM and cross-sectoral/national benchmarking based on a literature review.

Ninety-two participants were involved across the three HCOs under the study, with representation of the main groups of e-health, clinical and nonclinical stakeholders. The benchmarking exercise incorporated 9,226 institutions providing worldwide coverage.

RESULTS AND CONCLUSIONS

The results show that e-health governance is in its infancy across sectors and countries. Eighty percent of organisations worldwide are in a transition point between a “committed” and an “established” process.

The results support the proposition that the more mature e-health governance is, the better the strategic alignment between e-health and HCOs. The strategic alignment is slowly maturing across the organisation (15 percent since 2008), progressing vaguely faster than e-health governance.

The conclusions of this study suggest there is a potentially strong statistical correlation between e-health governance and strategic alignment; however, more data are required to confirm this initial finding. It is recommended that the longitudinal analysis continues over the forthcoming years to validate the actual correlation ratio. Further research is also required in order to understand the influence the rest of the SAM dimensions have and to determine how e-health governance influences strategic alignment in isolation of the rest of the SAM dimensions. For this purpose, a simplified and adapted method to monitor these trends in future HCO research has also been provided.

Figure 1—Study Proposition

Source: Beratarbide, Kelsey and Gil. Reprinted with permission.
ENDNOTES


7 eHealth Industries Innovation Centre, Swansea University, www.ehi2.swan.ac.uk/en/what-is-ehealth.htm


11 Op cit, Murray, et al.


17 Op cit, Mieritz

18 Op cit, ITGI

19 Op cit, Shaffer, et al.

20 Op cit, Datasec


22 Op cit, ITGI


24 Op cit, World Bank


27 Op cit, Beratarbide and Kelsey

28 Beratarbide E; Critical Factors in the Adaptation of NHS to the Information Society in Fife: An Initial Causal Model, project reports, 2008, p. 1-60

29 Beratarbide, E.; Proceedings of the IADIS International Conference eHealth 2010, IADIS, Freiburg, Germany, 30 June 2010

30 Op cit, Datasec

31 Beratarbide E.; T. Kelsey; eHealth Governance, A Key Factor for Better Health Care: Implementation of IT Governance to Ensure Better Care Through Better eHealth, IGI Global, 2011, www.igi-global.com/chapter/ehealth-governance-key-factor-better/52361

32 Op cit, Luftman

33 Op cit, Henderson and Venkatraman

34 Full results and conclusions are described in a comprehensive e-health technical report available in the ISACA Knowledge Center, www.isaca.org/monitoring-progress-on-ehealth.