HealthManagement
Promoting Management and Leadership

Volume 4 / Issue 1 / 2009 - Country Focus: Belgium

Healthcare IT in Belgium

The legislative framework for e-Health in Belgium overlaps several existing laws and rules, ranging from privacy and data protection to certification of medical software and liability for devices. The key bodies officially developing the e-Health programme are the federal Health Ministry and the State Secretariat for Informatics.

Federal System Entails Incrementalism in Technology Adoption

The competitively federal nature of the Belgian State has led to e-Health policy being under the purview of several ministries and departments. This has resulted in overlaps and lack of clarity in authority and responsibility. A range of health related issues, such as preventive health and infrastructure, are dealt with at the regional level.

Given this federalist political culture, Belgium has so far taken a step-by-step approach to implementation of e-Health. Nevertheless, since e-Health itself continues to witness an accelerating pace of evolution in recent years – alongside moves to draw up new EU and global standards – Belgium has striven to frame an official national-level e-Health roadmap so as not to be left behind.

One factor strongly favouring e-Health in Belgium is that part of the funding for the country's hospitals requires delivering anonymised electronic data sets relating to hospitalisation, including diagnosis, procedures and length of stay. Such a requirement translates into an incentive for an electronic health record, and provides fuel for the solid takeoff of e-Health.

Official e-Health Roadmap – Key Initiatives

The principal Ministry of Health initiatives in the e-Health field so far include:

Ó Establishment of the Be-HEALTH national e-Health backbone to provide a patient master index as well as authentication services.

Ó Development of reference databases and codification systems for healthcare products and medical treatment.

Ó Appointment of a Health Telematics Commission of national experts to set up technical standards on the transfer and sharing of health data.

Ó Funding for follow-up research on issues such as patient identification, electronic signature implementation, certification of hospital information systems and telemedicine.

A Look Back in Time at a World Pioneer

At the current moment, a brief note on the history of consumer-focused high technology is crucial to understand the current state of e-Health in Belgium, and its prospects.

The first is the country's often-unacknowledged role (even by Belgians themselves) as hav ing developed and implemented some of the most dramatic mass-use IT projects in memory.

Years before the rest of Europe or the US, Belgium pioneered the use of ATM and POS cards in the 1980s. In the field of smart cards, the Belgian Proton system served as a model for similar initiatives across many other countries, and at one point Belgium accounted for a larger number of such cards in use than the rest of the world, combined. Belgium was also a leader in the area of household cable television, a foundation for today's broadband highway.

This quiet leadership role has not been lacking in the area of e-Health. Indeed, as far back as 1998, all beneficiaries of the Belgian social security system (practically its entire population) began using the so-called SIS smart card to access healthcare.

From SIS to eID

The SIS Card is currently being replaced by the Belgian eID card, a citizen electronic identification card launched in 2004 which is due to cover the entire population by 2009. [Belgium requires all inhabitants to carry identification.] eID is a smart card equipped with two certificates, one for authentication and another forgenerating digital signatures. It contains identification data which is also visible in print on the card. The cardholder's address, however, is stored exclusively in electronic form.

The eID card, which will steadily replace other cards for identification and authentication purposes, is therefore designed at its foundations to be a key to access centrally stored information. Such a principle will be applied when functionalities of the SIS card become integrated into the eID.

The Emerging e-Health Infrastructure

Apart from its rich experience with similar projects, a high penetration of broadband telecoms and cable TV network provides a ready infrastructure for e-Health services. In 2005, an EU study found Belgium leading Europe in terms of broadband as a share of Internet access.

The national e-Health network Be-HEALTH mentioned previously is designed to provide an umbrella backbone for e-Health services.

Since the 1990s, a host of dedicated private networks have also been set up to target e-Health, at both national and regional levels. The best examples of the former are the sick funds-run Carenet (used to transfer billing data between hospitals and pharmacies) and MediBRIDGE, while regional networks include Mediring and Mexxi.

The core aim of Carenet, which was launched in 2004, is to verify insurance entitlements for patients and allow thirdparty payment between insurance funds and all Belgian hospitals.

The Future – Intelligent Applications, e-Prescription …

2007 saw the pilot phase launch of two major regional networks for sharing patient records.

For its part, the Be-HEALTH platform is designed to ensure interconnection of independent networks and also be extended to support areas such as a register of health professionals.

Basic interoperability is now already possible at the ambulatory care level (see below), and the government has made it a priority to develop 'intelligent' applications for general practitioners (including decision support), establish codification schema of patient files for specialists, and make reference databanks available for the industry.

ePrescription has also been studied, and implementation tests are under way.

The Question of Standards …

In spite of such impressive headway, there is also as yet no universal and comprehensive technical syntax standard which is accepted and used by all parties concerned with e-Health in Belgium. Instead, de facto standards are the rule so far as the exchange of clinical data is concerned. There are also important differences in the field of data security standards.

Delimited text-based reporting is defined by the national social security Institute INAMI/RIZIV and used for third party payment (at hospitals – especially chronic care facilities, elderly homes and pharmacies).

The Belgian Health Telematics Commission has endorsed a set of XML syntax standards, based on HL7 version 2.3 – the so called Kmehr standard (Kind Messages for the Electronic Healthcare Record).

The transfer of Kmehr-compatible messages for EHRs is being developed further in order to integrate major EHR structuring elements and codification in what has been billed Kmehr 2.

... and the Challenge of Interoperability

As a major step towards country-wide interoperability, Belgium is introducing a Summarised Electronic Health Record or Sumehr. Production, export and import of Sumehr messages is, since 2005, mandatory for the labelling of EHR systems.

At the moment, it is already feasible to deploy Sumehr at the ambulatory care level. The government plans to set up certification schemes for minimum quality and interoperability levels of authorised ambulatory care software systems.

Nevertheless, the ongoing development of national health networks is expected to spur wider demand for Sumehr and quickly take it to a viable user level.

A Phased Approach to EHR

Such incrementalism and phasing of steps is also seen in the field of EHR.

EHR applications with meaningful clinical content are almost wholly used in a primary care setting.

In hospitals, EHR applications are either at the level of departmental systems with specific medical speciality content (for example, imaging, ophthalmology) or focused on managing paper (recording of orders and billable interventions); the latter also applies to at-home care.

A look Ahead

The strategic goals of e-Health in Belgium have evolved with time. Their locus standi was at first simply to attain cost efficiencies in the social security administration. However, in recent years, the e-Health agenda has also been seen as a way to kickstart quality improvements across the entire healthcare delivery spectrum. Both these factors, along with concerns about an aging population (which will put further strains on the country's generous healthcare system) now constitute the principal drivers of e-Health.

On its part, the government also foresees a public campaign aiming at a national roll-out to get users ready for the new era of e-Health.

Be –Health: Future Proofed for the Genomic Age

The key philosophy behind the Be-HEALTH backbone is to avoid centralising information and restrict operation to data ex -change between authorised parties, with anonymisation ensured where required. This is seen as a wise approach, given the permanent undercurrent of concerns about privacy – and the dampening effect this has on the wider takeup of e-Health across the world.

Being structured as a collaborative framework, Be-HEALTH is compatible with all types of healthcare data – most crucially genomic data. As a result, personal medicine is likely to be fully integrated into the Be-HEALTH service provision framework.

Published on : Sun, 4 Jan 2009