

S-5-1

From Technical Innovation to Widely Accepted, IT-supported Health Services. Experiences in Scandinavia and the EU at large.

N Rossing
Danish Centre for Health Telematics
Odense, Denmark

Keywords: barriers, ECG, eHealth, electronic health record, EU, research, implementation, standards,

It has taken between 15 and 20 years to reach from the very beginning of operational ITC for health care and to where we are now and where OpenECG is to-day. It may seem a very slow pace. And it is not totally true because for a considerably large number of application domains IT more than ICT was used in certain areas. Administrative and financial systems, laboratory systems, radiology systems and other hardware connected systems in ICU and anaesthesiology was in place much earlier.

Nevertheless, we are just on the beginning of implementing the shared or federated electronic multimedia medical record including medical images and vital signs such as ECGs. This sharing is a prerequisite for the continuous and seamless care of patients irrespective of time, geography and institutional sectors. And the road has been paved with frustrations and financial scandals in all public health services of the EU. Actually the present health IT initiative of the English National Health Service is a good example: Last year the launched the famous 2.3 billion £ investment plan over 3 years to get Health ICT going, in spite of many previous plans and initiatives.

I admit that that the electronic health record is not all health related IT, but it is the ultimate and necessary integration of relevant data including ECGs of individuals and it ought to be the cornerstone of eHealth, a new buzz word with many implications.

eHealth is

- TeleConsultations (previously Telemedicine)
 - Clinical Decision Making Support Software
 - Vital Signs Monitoring Services
 - TeleHomeCare
- Dissemination of Professional Continuing Education
- Public Health education & Information
- LifeTime Health Records
- eHealth Services
 - National ePrescribing Services
 - eNursing

eHealth is also a political matter. With the Lisbon declaration of 2002 member states committed themselves to have eEurope 2005 “IST for All” with the following content:

- General for eCommerce, eLearning, and eHealth:
 - Secure services, applications and content over an interoperable broadband infrastructure
- Healthcare:
 - Health cards, health information networks and on-line services.

This has been supported by

- EU Health Ministers’ Declaration of May 2003
- Health cards, health information networks, on-line services
- The Prague Declaration of September 2003

Yet only very few countries and a handful of regions in Europe have designed or implemented a coherent health IT services successfully: The Scandinavian countries, Belgium, Wales, Andalusia, Slovenia, Estonia; and Crete has a beautiful design ready to implement.

With some notable exceptions, the established health care sector of Europe has been tardy compared with other sectors. Even without considering reimbursement of professionals, legal and ethical issues, reasons are at least sixfold.

First, health care is costly, and ICT and the compulsory infrastructure are opportunity costs, which decision makers have given lower priority than investment in immediate medical needs. Second, the health care professionals have not all fully understood the potential of eHealth or have even feared the work load, loss of power, and change of roles and organisation. Thirdly, regional or local politicians and professionals have failed to push for digital solutions because the fear of loss of power control as a consequence of globalisation forgetting the opportunities for improved services, involvement of the patient in the decision process by access to data, and the better quality of continuity of care across health institutions. The fourth reason is that full exploitation of eHealth opportunities necessitates the presence of the electronic health record, which barely is a product, but rather a journey not frequently embarked upon. Point five, we are still short of good and solid evidence that all the promises will hold true. But they do in other business sectors.

The last and sixth point is that interoperability, as demanded in the political declarations necessitates standards. Proprietary standards of producers of equipment have been tolerated too long. We must agree on open and documented standards, but the academic world has not understood the necessity to move fast and not continue to create problems rather than solutions. We have fortunately seen a positive move from the side of industry in radiology with Dicom and maybe IHE. We must now ask the ECG academics to open up and finalize and we must request that the ECG equipment producers do follow the example of the radiological industry. They have been able to hide themselves because the cost of one piece of equipment is moderate to that of a radiological piece and nobody thinks of the difference in numbers of pieces. To the academics: Deliver or perish, the EU commission's research programs are not going to support you any longer. To the producers: Do not be shy. Common standards have proven not to compromise your competitiveness.

We must move from isolated projects to Europe-wide operations 24 hrs x 365 days a year. To do that, we must create solid public/private partnerships with industry. We as users must learn to specify our requirements better than in the past, and industry must understand the needs of the market segment better, hopefully as well as does the pharmaceutical industry. The time is right. The outcomes of the technological and the biological revolutions must be brought together.

Address for correspondence:

Niels Rossing
Udsigten 13 B
DK-2820 Gentofte
Denmark
E-mail: nr@health-telematics.dk