



CONTINUITY OF CARE – THE INTEROPERABILITY VISION

LINKCARE MID-TERM WORKSHOP

Date: 14 June 2006, 13:00-17:00
Venue: Nova Conference centre, Trondheim, Norway
Congress URL: <http://www.europacs.net/index.html>
Project URL: <http://www.linkcare-eu.org>

Workshop organiser

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| Marius Mikalsen | Telephone: +47 73 59 29 29 |
| Research Scientist | Mobile: +47 97 03 40 99 |
| SINTEF ICT7465 | Fax: +47 73 59 29 77 |
| Trondheim | e-mail: marius.mikalsen@sintef.no |

Outline of the workshop

The number of patients suffering from chronic diseases has increased rapidly over the recent decades. The disease burden is changing from acute to chronic care. The new conditions require that we rethink traditional models of care in order to meet the challenges of tomorrow. Prominent aspects of new care models for chronic conditions are more stakeholders in the care process, empowered patients that require control over their treatment, and increased patient mobility in a unified Europe. There is a need for continuity of care over longer periods of time, cooperating caregivers, and geographical borders.

The emerging models of care would greatly benefit from interoperable health services in support of continuity of care, including shared access to electronic patient records (EPRs). The vision is a Europe with interoperable healthcare services providing higher quality of care, more efficient and safe work processes resulting in considerable quality and efficiency gains. However, there are still very tangible challenges to realizing the vision of European continuity of care. Some of the issues that need to be addresses are; what constitutes usable and efficient services for patients and practitioners, how can we converge dichotomous services, what standards can be applied, and what is feasible within current body of law. This symposium will bring together practitioners, international research and industry to address these challenges and discuss State-of-the-Art approaches to a convergent and interoperable continuity of care. We will address continuity of care and interoperability:

- from the health service provider perspective
- from the patient perspective
- from a juridical perspective
- from a standardization perceptive
- from an industrial perspective

Programme

| Time | Name | Affiliation | Country |
|-------------|----------------------------|--|---------|
| 13.00-13.15 | Ole Martin Winnem (Chair) | SINTEF | Norway |
| | Salvatore Virtuoso (Chair) | TXT eSolutions | Italy |
| 13.15-13.45 | Ken Rubin | OMG/Veterans Administration | USA |
| 13.45-14.15 | Josep Roca | Hospital Clinic de Barcelona | Spain |
| 14.45-15.05 | Leif Erik Nohr | Norwegian Centre for Telemedicine | Norway |
| 15.05-15.25 | Break | | |
| 15.25-15.45 | Jorunn Bjerkan | Central Norway regional Health Authority | Norway |
| 15.45-16.05 | Miroslav Koncar | Ericsson | Croatia |
| 16.05-16.25 | Klara Borgen | Trondheim kommune | Norway |
| 16.25-16.45 | Tom Christensen | NTNU | Norway |
| 16.45-17.00 | Discussion | | |

Ken Rubin. Electronic Data Systems, Inc., USA

Enabling seamless healthcare

Enabling seamless healthcare requires IT to be agile, accommodate differences in culture, care practice, software products, and technologies. The interoperability mechanism needed to support this environment must graduate beyond data exchange to shared IT services, allowing organizations to expose capabilities to business partners while retaining the ability to adapt internally.

Services are pervasive in healthcare—pharmacy, radiology, and laboratory are each examples—but the notion of IT services has not yet achieved widespread acceptance. Services such as person identification, record location/retrieval/update, and terminology management are examples of functions that are pervasively available but not interoperable, and which would benefit from the existence of industry standards. The Healthcare Services Specification Project (HSSP) is a joint standards development initiative hosted by the Health Level Seven (HL7) and Object Management Group (OMG) communities is addressing these needs.

Josep Roca. Hospital Clinic de Barcelona, Spain

Provision of care in chronic patients: The quest for interoperability

This session will present the background for the HSSP project and explain why it is being driven so significantly by the caregiver community. It will rationalize why service-oriented architecture compelling as a platform to support healthcare IT and explaining the value that

these emerging standards will bring to all facets of the domain. Finally, it will introduce the artifacts under development, with representative examples of how these artifacts can be used to improve interoperability, minimize redundancy, and future-proof technology investments.

The availability of reliable and affordable information and communication technologies is prompting the redesign of provision of healthcare. A number of disease management strategies, notably those targeting chronic conditions, are to benefit from the application of remote monitoring facilities, data transmission and ubiquitous accessibility. There is evidence of the success of specific health care delivery programmes supporting home hospitalisation, early discharge or preventing exacerbations in selected target groups of patients.

Unfortunately, large scale deployment of such programmes still remains an open issue. This seems to be unnecessary postponing the release of the anticipated benefits to substantial layers of the population. The reasons that explain this state of affairs are varied in nature but possibly interoperability, understood in a wide sense is the kernel of it. This means interoperability of the IT systems but also interoperability of the procedures and strategies envisioned to manage the patients.

The latter can be even more complex than the former, specially when it comes to the interplay and co-ordination of different professionals across levels of care. A quest for health care on its own right for the 21st century.

Leif Erik Nohr. Norwegian Centre for Telemedicine, University Hospital of Northern Norway, Norway

European interoperability and cooperation in eHealth - some legal challenges

The process of facilitating free movement of people and services throughout Europe is in full motion and gaining strength both through the establishing of new legislation and other measures and the fact that more states are becoming, or want to become, EU members. Health Care is naturally one area where increased and improved cooperation and interoperability can generate great benefits both for patients, professionals and administrators. Modern information- and communication technologies are no doubt powerful tools in this process.

Health Care is an essential part of the European welfare states. One consequence of this is that health care is subject to quite strict legislation on a national level. In addition, much of this legislation tends to be "protectionist", not aimed at facilitating health care across national borders. This in contrast to ICT solutions which, to a large extent, are borderless.

Pan-national cooperation and interoperability in health care and through ehealth solutions is obviously a challenge to national laws and regulations. Challenges span from language and cultural differences, via ensuring confidentiality and security to licensing and codes of conduct and responsibility issues. This presentation will discuss some of these challenges and some possible solutions. The presentation is based on years of work in the field of telemedicine/ehealth and law and on experience from projects dealing with different aspects of cross border ehealth services.

Jorunn Bjerkan. Central Norway regional Health Authority, Norway

The Norwegian pilot, The SamPro project.

The reason for the SamPro project is a new law and specific regulation. This regulation instructs health –and social care services to offer an establishment of coordinated multidisciplinary individual care plans for clients with long-term and complex state of illness or dysfunction.

The SamPro project has developed and pilot-tested a web-based application for this specific team work. Access to the application is both personal and role based according to the client's wishes. More than 50 groups in the region of Middle Norway are established, each including a single client and numerous professional caregivers. Group members come from health – and social care in municipalities or hospitals, schools and kindergartens or different nursery homes are also included.

Group members are educated and followed up in using the web-based application for planning and maintaining of the multidisciplinary individual care plan. Further development according to functionality and usability is based on results from the pilot groups. Patient organizations attend the project group, and clients have equal status in the pilot groups as the others bringing corrections and ideas to the project group.

The application Unique SamPro is now commercialised for the Norwegian market. The SamPro groups iteratively continue testing new iterations, proposing new or improved functionality and usability. For functionality the project for 2006 concentrate on communication to EPR-applications and e-learning, in which we anticipate results in the Linkcare project to be a support.

A PhD-project is related to the Norwegian pilot as the PhD-student holds the title of project leader for the SamPro-project.

Miroslav Koncar. Ericsson Nikola Tesla d.d., Croatia

Achieving interoperability goals of healthcare information systems using the emerging HL7 standard

One of the most challenging requirements that healthcare information systems are today faced with is the high-level efficient interoperability provisioning. The notion of interoperability in this context includes various levels of business processes management, like integrated care services delivery, administrative, financial and medical data exchange, and application layer semantics management. This challenge gets even more demanding when we take into account the fact that most of the healthcare delivery settings are characterized by number of separate proprietary and legacy systems. These solutions usually run in parallel, encompass only distinctive business processes and do not provide transparent communication mechanisms.

In order to provide efficient and customizable integration services to the healthcare delivery environments, we have identified HL7 organization and version 3 of HL7 specifications as the foundation for our services delivery strategy. HL7v3 represents the emerging standard that has several distinctive qualities in comparison to other recommendations, like object oriented and use case driven approach, scope of all three components in abstract integration model (processes, semantics, technology), reduced optionality and conformance profiles etc. With

HL7v3 standard as our focus in the services offering, we target in adding value of both the efficiency of healthcare enterprises business processes and reduction of related care delivery cost. The presentation aims to provide more insights into this strategy framework, and introduce main qualities of HL7v3 standard specifications. It will also include the results from the case study, namely national healthcare information infrastructure project in Croatia that is founded on HL7v3 specifications.

Klara Borgen. Trondheim kommune, Norway

Sharing information among profession and provision level

Several research projects have lately concluded that medical errors related to use of drugs are very common. Especially concerning patients where public services have taken over the drug administration, a group of patients that mainly includes elderly chronic patients with complex medication scheme, errors occur. Research shows that between 50% and 90% of patients list of medication differs between family doctor and home nurses responsible for administration of the medication.

Trondheim kommune is now developing a service that aims at providing an efficient, secure and user-friendly solution to support the increasing needs of cooperation between caregivers. Central is the management of medical treatment and shared information about current medication scheme for the patient. Four healthcare providers have a strong need to share this information in order to provide quality services to their patients. From the municipal, which have the daily medication administration for the patient, point of view providing quality services without errors is dependent on an accurate information material – information that is provided from the other service providers in the chain, including emergency units, hospitals and general practitioners.

The service is built up with a central storage which mirrors selected part of the general practitioners journal and that provide needed information to the stakeholders at point of care.

Tom Christensen. NTNU, Norway

National solutions for electronic interchange of health information

The ELIN-project was founded in 2002 and its objectives are to create standardised solutions for communication. The project was founded to manage the needs of communication for a general practitioner, including referral letter, epicrisis, communication upon laboratory tests and result, electronic prescription, electronic medical certificate and communication with patients.

The interchange format is built upon national standards developed by KITH, and the ebXML framework supporting secure transfer of documents. The project is within its third phase with focus on electronic prescription and communication with patients. Project results include solutions where all parties in Norway can communicate using a common standard and framework in a secure and safe way without transferring paper documents.