eHealth and Telemedicine Services in Catalonia

Joint AIM – EHTEL Telehealth

Study visit

Barcelona, 12 March 2013

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Organisation and roles

HEALTH DEPARTMENT / CATSALUT (Health Insurer)
ICT strategic plan

Servei Català de la Salut (CATSALUT)

Health Information & Quality Assessment Agency
ICT Plan deployment

Information Systems
Manage health information and create knowledge to the system

ICT Service Centre
Support public health ICT systems and infrastructures

ICT Coordinator

Health care Providers
TicSalut Foundation
ICT Providers
ICT Strategic Plan 2008 - 2011

Mission of the Department of Health in ICT

Boost the objectives and strategies of the Department through ICT, guaranteeing the citizen right to access information and supporting the task of professionals to improve the quality of healthcare assistance. The Department will develop a leadership role in the ICT sector, promoting both the image of Catalonia as an innovative territory and the participation of all healthcare agents.

6 main strategic objectives and 34 actions

S.O. 1 Implement ICT as a strategic element in Healthcare

S.O. 2 Support citizens in the access to information and services to promote their health

S.O. 3 Endow professionals with ICT tools to perform a high-quality care

S.O. 4 Answer efficiently the requirements of information, management and security in the sector and the Department

S.O. 5 Endow agents with the proper infrastructures and guarantee interoperability

S.O. 6 Boost and project Catalonia as an innovative territory in Healthcare ICT

Key ICT projects in Catalonia
ICT Strategic projects in Catalonia

- **Telemedicine**
  - Care at a distance performance

- **Medical image digitization**
  - Digitized medical images backup

- **Electronic Prescribing**
  - Electronic prescribing and dispensation services

- **Personal Health Record**
  - Online site with health personal information

- **Interoperability among stakeholders of the health sector**
Prioritization of action lines

Type of communication

Deferred Time

Real Time

Professional - Professional

Professional – Professional & Patient

Professional - Patient

**Teleconsultancy:**
- Cardiology
- Dermatology
- Pediatric
- Neurology
- Psychiatry

**Diagnosis:**
- Radiology
- Anatomic pathology
- Dermatology
- Ophthalmology

**Management of chronic diseases:**
- Diabetes
- Respiratory failure
- Heart disease

Actors involved
Telemedicine services provision

Type of communication

Deferred time
- Diagnosis:
  - Radiology
  - Anatomic pathology
  - Dermatology
  - Ophthalmology

Real time
- Remote education, Clinical Sessions
  - Cardiology
  - Dermatology
  - Pediatric
  - Neurology
  - Psychiatry

Teleconsultancy
- Management of chronic diseases:
  - Diabetes
  - Respiratory failure
  - Heart disease

Professional - Professional
Professional - Professional & Patient
Professional - Patient
Patients
Carers, ...
Telemedicine and Medical Teleassistance Plan

TeleConsultancy:
- At Home
- Retirement homes
TeleNeurology
Monitorisation of Chronic patients
Integration Social&Health

Telediabetis 2
Telediabetis 3
Home Sweet Home
Renewing Health
e-NutriCat
FATE
e-FALL

TeleRehabilitació
RGS
Telepresons
Telediabetis 1
TeleOftalmo
Cardiopatia Congènita
TeleDermato
ECOPIH
TeleCremats
TeleICC, TeleHTA

PostPart TeleIctus FaseII
Telemedicine evolution

- Number of experiences in telemedicine is increasing
- Number of telemedicine services provided does not follow the same tendency
  - Difficulties appear when pilots have to be provided as usual services
Consolidates the adoption of telemedicine

Telemonitorització  | Telediagnòstic  | Teleconsulta

- 2007: 29%, 15%, 6%
- 2008: 26%, 15%, 11%
- 2009: 31%, 9%, 5%
- 2010: 25%, 23%, 5%
- 2011: 30%, 29%, 8%
- 2012: 51%, 37%, 10%
### Specialties in Telemedicine

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Telemonitorisation</th>
<th>Telediagnosis</th>
<th>TeleConsultancy local</th>
<th>TeleConsultancy with reference centre</th>
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<tr>
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<td>HIV</td>
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</table>
Continue increase of Health 2.0

Evolution Health 2.0 2012

- 2008: 4%
- 2009: 8%
- 2010: 14%
- 2011: 29%
- 2012: 38%

Contents 2.0

<table>
<thead>
<tr>
<th>Content</th>
<th>Avui real</th>
<th>Planificat en el futur</th>
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<tr>
<td>Repositori de vincles</td>
<td>1%</td>
<td>80%</td>
<td>18%</td>
</tr>
</tbody>
</table>

- Real today
- In a future
- Unplanned

- Between patients:
  - 4% Real today
  - 17% In a future
  - 79% Unplanned

- Between professionals and patients:
  - 7% Real today
  - 23% In a future
  - 70% Unplanned

- Between professionals:
  - 24% Real today
  - 18% In a future
  - 58% Unplanned
Intensifying the use of EMR by professionals

Use EMR by Doctors
- 80% use,
- 11% partial use,
- 4% very partial use,
- 4% no use,
- 9% no use.

Use EMR by Nurses
- 65% use,
- 18% partial use,
- 4% very partial use,
- 5% no use,
- 7% no use.

Structured Templates
- 9% use,
- 38% partial use,
- 27% very partial use,
- 22% no use,
- 4% no use.

n=55
What is already there & next steps

- ICT Plan 2008-2011 – done
  - 88% health care centres connected to Regional EHR
  - 94% health care centre do not print radiological images
- Network infrastructure improved
- Interoperability & Standards office running

Provide TM services
Implement and/or define, standardize

Telemedicine & Telecare service plataform

HC3 i REC@T

PIMED (Backup Imatges)
New innovation perspectives in health care

Develop new ICT innovation strategies

Innovation lines identification

IDEA

Identified lines promotion

PILOT

Evaluation

PROJECT

Buying Innovation

Priority definition

Direcció General de Planificació i Avaluació

Generalitat de Catalunya
Departament de Salut
How to provide TM services

- Defining interoperable access & storage of clinical data to certified providers
  - Standardised messages for medical devices
  - Analysing ISO 11073/IEEE 1073
  - Giving support to health care providers to adopt interoperable systems from the Interoperability & Standards office
  - Certifying systems

- Offering the citizens services from different providers to choose the one best suits their own needs
  - Defining interoperability for Personal Health Folder
  - Encouraging health care providers and companies to include services where citizens can find their health information
New Horizon, New Opportunities

✓ New HealthCarePlan 2011-2015:
  ▪ L2-A chronic a patient oriented
    – e-health solutions for chronic patient management
  ▪ L3-Primary care resolution &
  ▪ L4-A specialisation based (Highly specialised service)
    – e-health services as they will be developed on a healthcare provider level

✓ Is it good?
  ▪ Because it is already part of the healthcare system
  ▪ It is mainly present as a horizontal solution instead of a vertical solution

✓ Is it bad?
  ▪ Because it is seen as something not in the frontline, but everybody knows that ICT is needed to transform the current HealthCare Model to Non FaceToFace Model.

✓ New reimbursement model: because it is the first time that a reimbursement model based on results could finance some telemedicine services
New Reimbursement Model. Goals

✓ More equitable model according to morbidity of the population
✓ Increase efficiency of centres to reimburse according to the episode
✓ Value the role of Primary care, according to the capacity to manage the intermediate episodes, with real capacity (with budget) to derive patients to specialised care
✓ Improvement of treatment for chronic patients through:
  ▪ Penalisation of readmissions
  ▪ Adaptation of care
  ▪ New activity lines for subacute patients
✓ Facilitating patient care adaptation:
  ▪ Through the variable part of the contract
  ▪ Through the triage and through differentiated reimbursement of emergency services according to complexity
  ▪ Facilitating the “non-conventional” health care (nursing at home) thanks to payment for episode
✓ Transferring risk to the healthcare provider
✓ Guaranteeing the care continuum through shared territorial resources with a networking vision
But wait, there are still many...
Challenges for Telemedicine deployment

✓ How to speed up telemedicine adoption in public health
  ▪ Laws and regulation
  ▪ Incentives to cost containment
  ▪ Providing scientific, economic & organisational evidence
  ▪ Promoting large scale pilots
  ▪ Providing TM tools for all the health care providers
    − Teleconference
    − Web 2.0 (Professional-Professional, Professional-Patient)
    − eCollaboration tools (Sharing clinical information for diagnosis and treatment)

✓ TM financing & ROI
  ▪ Based on services provided? In-situ or remote?
  ▪ Based on savings (less admissions, less visits, ...)
  ▪ Based on health status improvement

✓ Ethical & legal issues
✓ Integration of IT systems (Interoperability & standards, Governance)
And more ...
Telemedicine & Chronic care Challenges

✓ Population stratification criteria
✓ Prevention of diseases & promotion of healthy habits
✓ Expert patient, how to get there?
✓ Self-monitoring: who is responsible?

- Clinical requirement: under prescription / commodity
  - Who is responsible for the service provision? Business models

- Extra-clinical requirements
  - Technology acceptance & ability
  - Age
  - Attitude of patients towards their disease

- Access to distributed data
Questions?
Comments

Thank you for your attention

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