European Commission activities in eHealth

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Presentation outline

- Policy & Vision - i2010 initiative
- Research - 17 years of experience in eHealth
- Support to deployment - eHealth Action Plan
i2010: three priorities

• A Single European Information Space
  • The completion of a Single European Information Space which promotes an open and competitive internal market for information society and media;

• Innovation and investment in research
  • Strengthening Innovation and Investment in ICT R&D to promote growth and more and better jobs;

• Inclusion, better public services and quality of life
  • Achieving an Inclusive European Information Society that promotes growth and jobs that is consistent with sustainable development and prioritises better public services and quality of life.
Personal Health Systems

- Prevention & early diagnosis
  - citizen empowerment to manage own health status
  - emphasis in preventative lifestyle
  - management of chronic diseases
  - independent living

- In the form of
  - Wearable, implantable, portable systems
  - Point-of-care systems (biochips)
Ensuring continuity: Prevention diagnosis treatment, follow up

Connecting all the points of care:
- Hospitals
- Physicians (GPs)
- Pharmacies
- Laboratories
- Homes

Vision: ICT for Person-Centred Health systems
Improving access, quality and efficiency for everyone
HealthGrid Overall Vision

HealthGrid as an environment for:

- “Google for medicine” global sharing of health information
- Computation services accessible to all actors

Computing G

Data G

Knowledge G
Biomedical informatics (BMI)
Overall Vision: Predictive medicine

Biomedical informatics: synergy between biomedical informatics and medical informatics.

BMI enables the integration of biological research into medicine for better health molecular-medicine.

Population
Patient
Tissue, organ
Cell
Molecule (Gene, Protein)

Genome
Epidemiology
ICT for an ageing society
- call for proposals

- Support to Daily activities
  - Increase independence and autonomy “at home”
    (Assistive technology, smart homes, warning systems, ...)

- Participation in society and mobility
  - Communication, access to education, leisure, ...

- Healthcare
- Social care
- Informal care

Integrated care
Interoperability
Budget, 6th call for proposals, FP6:

- Total indicative budget 40 M€
- Deadline April 25, 2006
- IPS: 50%
- STREPs, CAs, SSAs: 50%
eTEN 2006 call for proposals

- Estimated total budget: 45.6 M€
- 17th February - Call for proposals published
- 19th May 16:00 - Call closes
- Evaluation June/July (assisted by independent experts)
- Negotiations start in October

See full announcement in EU Official Journal and eTEN website
http://europa.eu.int/eten/
"European e-Health Area – An Action Plan"

- Approved by Commission, 30 April, 2004
- Endorsed by the Council (EPSCO [Health] Council), June 2, 2004

-------- addressing e.g. --------

- Leadership / National eHealth Action Plans
- Support to mobility of citizens
- Common approach for patient identifier
- Collaborations / Finding best practices
- Boosting investments in eHealth
- Interoperability / Standardisation
- Legal framework
eHealth Action Plan: Meeting with Member States
Interoperability of Electronic Health Records – ongoing work

European solution

EHR-"Patient summary"

Identification, data security, privacy

C1 C2 C3 ............ C24 C25 ...... EHR

Local/Regional solutions

PS1 PS2 PS3 …

PS1 PS2 PS3 …
EHIC

The European Health Insurance Card
Electronic Health Insurance Cards (example)

**FACTS**

- Phased approach, 2002-2005, ~2M€ so far
- Replaces paper health insurance form (E111)
- Focus on back-office system implementation
- Started as IST R&D project with first pilots on Franco-German & Franco-Belgian borders
- Regulation (1408/71) European Health Insurance Cards 2004 refers to NetC@rds
- 10 Member States now involved

**Participants:** France, Germany, Austria, Greece, Finland, Italy, Czech Republic, Slovakia, Slovenia & Hungary

**Trials 2004:** Olympic & Para-Olympic Games
**Trials 2006:** World Cup (football)

Contact: Mr David Broster – eTEN Head of Unit
Chairpersons: Stakeholders Group on eHealth Interoperability
eHealth Ministerial Conference
Tromsø, Norway, May 23-24, 2005

• Themes:
  - eHealth Action Plan
  - Facilitating mobility within and between countries
  - Supporting more responsive health services
  - Improving access, quality, productivity

• 29 Exhibitors, best practice, from 17 Countries
• 500 participants, 23 politicians (12 ministers)

Next Meeting, Malaga, Spain,
10-12 May, 2006
BY INVITATION
eInclusion High Level Conference

Riga, Latvia, June 12-13, 2006
Thank you for your attention
To find more information on ICT for Health / eHealth:

- eHealth Policy site: http://europa.eu.int/information_society/activities/health/index_en.htm


For contribution to the newsletter and contact: ehealth@cec.eu.int

Main IST R&D site: www.cordis.lu/ist
Examples of eHealth developments for elderly

1. Remaining autonomous and staying longer at home
2. Supporting mobility
3. Keeping healthy
4. Improving healthcare
ICT for Health – Summary of eHealth Activities and Plans

Basic research

Applied/Industrial R&D

Deployment

Biomedical informatics
Virtual Physiological Human

Decision Support System

Personal Health Systems (wearables)

Health Grid

Health info networks & services

Support to eHealth “Action Plan”

Support to Independent Living in an Ageing Society

5 years 10 years 15 years

Time to results
Current Research Challenge: Integration of biomedical data from biology to public health

INFORMATICS

Public Health
Disease
Patient
Tissue, organ
Molecular

Genome Epidemiology
Health information levels

Supporting Molecular Medicine
Information Society
When?

- Three meeting of the Stakeholder group on interoperability till the end of March 2006.
- April 2006, publication of the Commission staff working paper on interoperability.
- Further consultation of relevant stakeholders through a public consultation will allow the refinement of the Recommendation on eHealth interoperability to be issued by 2007.
Department of Health in UK estimates that one in ten patients admitted to NHS hospitals will be unintentionally harmed.

Patient safety incidents cost the NHS in UK an estimated £2 billion a year in extra bed days, in addition hospital acquired infections add a further £1 billion to these costs.

In the Netherlands, approx. 800,000 Dutch people over the age of 18 have been the victim of errors due to the inadequate transfer of medical information.
ECDC, Stockholm, Sweden

European Centre for Disease Prevention and Control

Operational since May 2005, now 35 staff

Strengthening Europe's defences against communicable diseases
DG SANCO: Information objectives

- Develop health indicators:
  - Analyze and report on the health status
  - Provide information to citizens
  - Increase the evidence basis for policy making
Network of Competent Authorities
Representatives of health authorities

Seven working parties
Indicators, environment and health, mental health, accidents and injuries, lifestyles, mortality and morbidity, health systems

Health and Environment Work Package
The EU is acting to support improvements in healthcare provision throughout the Union:

- Working groups under the HLG:
  - cross-border care/purchasing
  - health professionals
  - centres of reference
  - information and e-health
  - impact assessment
  - health technology assessment
  - patient safety
Reform needs to be the guiding principle for national as well as European economic policy. It is vital that Member State and EU measures complement each other to create a powerful growth and jobs engine. This is our common responsibility, and the job is not finished until every worker, every business, every consumer can enjoy the benefits of reform.
A coordinated effort of all stakeholders accompanied by a large consultation of interested parties as well as implementation activities are necessary in order to agree on a Recommendation on eHealth Interoperability.

The ultimate goal is to enable access to the patient’s electronic health record, patient summary and emergency data from any place in Europe.
eHealth Action Plan: Meeting with Member States
Thank you
for your attention
Development of European networks of centres for patients who have conditions requiring a particular concentration of resources or expertise

Could also be focal points for medical training and research, information dissemination and evaluation

2006 Pilot projects
How address interoperability

The eHealth Stakeholder’s Group on Interoperability may initiate:

• The topics to be explored by mixed ad-hoc subgroups with the support of the Standard Development organisations.

• The participation to such WGs could be optional.

• Drafting activities are insured by the participants involved in research projects and studies.

• Work in close connection to the Member States
ECDC: Broad mandate in public health
– initially for communicable diseases

• Main mission is to identify, assess and communicate current and emerging threats to public health:
  • Risk identification and risk monitoring and assessment
    • Surveillance
    • Epidemic intelligence
  • Preparedness planning
• Response to health threats and public health events
A European wide public health portal will be launched in May 2006.

- Providing an across the board picture of health issues at Community level.
- Linking to national and regional websites and involving civil society.
- Funded under the PHP, with support from the IDA (interchange of data between administrations) programme.
<table>
<thead>
<tr>
<th>Scientific Advice</th>
<th>Surveillance &amp; Communication</th>
<th>Preparedness &amp; Response</th>
<th>Administrative Services</th>
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**Director and Director’s Cabinet**

**Influenza**

**Antimicrobial Resistance, hospital infections**

**HIV/AIDS and other STI and bloodborne viral inf.**

**Multidrug resistant Tuberculosis**
EU support to eHealth Research

Research until 2004: Technologies available

- Electronic Health Records
- Regional Health Info System
- Tools for efficient health delivery

Medium term: Technologies expect. by 2010

- Personal health systems (wearables)

Long term: 10 to 15 years

- Biomedical informatics, HealthGrid,
- Disease Simulator
- Virtual physiological human
EU support to eHealth Research

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Well known fact: Health sector is facing great challenges

- Fragmented care delivery
- Information & resources management
- Ageing population, rising costs

Less known fact: eHealth is a tool for these challenges

- Enables Continuity of care
- The tool for information management
- Supports autonomy and mobility
- Proven to be cost-effective
Key facilitators for:

- Continuity of care (prevention, monitoring, rehabilitation, inside & outside hospitals)
- Citizen-centred care
  - citizen empowerment to manage own health status
  - provision of personalised care
  - emphasis in preventative lifestyle
  - early diagnosis
  - management of chronic diseases
  - independent living
Europe is leading is a leader in deployment of eHealth tools

- **Electronic health records in primary care**
  EU is leading the world with over 80% GP online

- **Regional Health Information Networks**
  The best real life cases in EU (e.g. DK, SE, BE, FI, ES..)

- **Demonstrations at eHealth 2006 High Level Conference, May 10-13, 2006, Malaga Spain**
Some facts about health sector

WORLD

• Health care expenditure around € 3,000 B, Health technology market is about € 284 B (Medical Devices € 184 B, eHealth ~ € 100 B)

EU

• Employs 9.3 % of total workforce in the EU, more than 15 Mil people (compared to retail 13.0m, business services 13.3m)
• Health Technology Market in EU ~ € 70 Billion
• eHealth is a third largest industrial pillar of Healthcare whose market will correspond to 5% of HC expenditure within the next 10 years.
• Funding of European Commission in Health Technology € 110 M/year (Information Society, Life sciences and Nanotechnologies Programmes)
• A single European Information Space
  Promoting an open and competitive internal market for information society and media

• Innovation and investment in research
  Strengthening ICT research to promote growth as well as more and better jobs

• Inclusion, better public services and quality of life
  Achieve an Inclusive European Information Society that promotes growth and jobs in a manner that is consistent with sustainable development and that prioritises better public services and quality of life
The scene
Some Challenges of Health Sector

• Social challenges, such as:
  Ageing, Mobility, Globalization

• Economy challenges, such as:
  Rising costs; new diagnostic and treatment possibilities; increasing expectations from demanding and knowledgeable patients and citizens

------------------------ Remedies includes------------------------

• Policy – Cross border co-operations
• ICT in Health – Access, Quality, Economy
Support to deployment of eHealth

- eHealth Action Plan *(Communication April-2004)*
- eHealth WG with Member St.
- Stakeholders Group on eHealth Interoperability
- High Level eHealth conferences, Malaga, May 06
eHealth Deployment Support Studies

- Patient Safety, Risk Management
- eHealth Impact (cost-effect.)
- Legal and regulatory aspects
- Patient and prof. identifiers
- eHealth good practices
- eTEN projects
Coordination of eHealth Action Plan in Europe

EPSCO Council
European Commission
Telecom Council

DG SANCO
High Level group on Health Services and Medical care
Subgroup Health Information and eHealth

EHealth Conferences

Ministers High Level Participants

DG INFSO
eEurope Advisory group
eHealth Working Group

Telecom Council

Stakeholders Group
CEN TC 251, ETSI, CENELEC, ISO TC 215, CEN/ISSS,
Health practitioners (doctors, nurses, etc.), Patients, Health Managers, Hospitals, Media
Industry (EHTEL (ind.), IHE, COCIR, EAR, EUROREC, HINE),
EU projects (COPRAS, SEMANTIC HEALTH, RIDE, i2HEALTH, eHealth ERA…) and studies
Deployment Policy
From Research to Market

- Available technologies are not sufficiently used

- Developing a European market requires:
  - Strong involvement of national ministries
  - Putting the technologies « at the centre » of health policies (ex. Electronic Health Records, Healthcards)
  - Moving from regional to national to European dimension
    - Fighting against fragmentation
    - Moving from « niche markets » to « mass markets »
    - Ensuring interoperability
    - Overcoming legal/regulatory problems
What to address in interoperability

Specific topics are currently identified by EU Ministries of Health and ICT (eHealth Working Group)

- Patient summary
- Patient/practitioner identifiers
- Emergency data set

*eHealth Stakeholder’s group* (users, Industry, experts) is currently working on these issues

Goal: European Commission RECOMMENDATION on interoperability on the above issues in 2007
"European e-Health Area – An Action Plan"

• Approved by Commission, 30 April, 2004
• Endorsed by the Council (EPSCO [Health] Council), June 2, 2004

Addressing common challenges – selected examples:

• Best practices collection (EC, 2005)
• National/regional roadmaps (MS, 2005)
• Common approaches for patient identifier (EC+MS, 2006)
• Interoperability standards for EHR (EC+MS, 2006)
• Boosting investments in eHealth (MS, 2007)
• Deployment of health information networks (MS, 2004-2008)
  • Including broadband, wireless, grids
• Legal framework, certification of qualifications (EC+MS, 2009)
# 20 Years of eHealth in European Union

## Past 10 years (1991-2002)

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<thead>
<tr>
<th>FP2</th>
<th>FP3</th>
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<td><strong>Computer Applications for Doctors</strong></td>
<td><strong>Regional Health Info Networks</strong></td>
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<td><strong>Telemedicine systems and services</strong></td>
<td><strong>Home-care systems</strong></td>
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<td><strong>Personal Health Systems</strong></td>
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<tr>
<th>Budget</th>
<th>Projects</th>
<th>Results</th>
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<td>20M €</td>
<td>30</td>
<td>AIM Community</td>
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<tr>
<td>100M €</td>
<td>63</td>
<td>1st batch of Products</td>
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<tr>
<td>140M €</td>
<td>158</td>
<td>EU Health Telematics Industry</td>
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<tr>
<td>200M €</td>
<td>125</td>
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## Next 10 years (2003-2014)

- Ambient intelligence supporting well being
- Health Knowledge Infrastructure
- Biomedical Informatics for individualised health
- **Keywords:** Biosensors, Wearable & Implantable systems, eCell, eTissue, ePerson, HealthGRID

**eEurope 2002-5 + i2010**
**eHealth 2003-4-5-6 Conf.**

- **Support Public Health Policy**
- **Coordination & Support to Regional - National Plans, International cooperation**
- **Technology assessment & transfer**

**Keywords:** Biosensors, Wearable & Implantable systems, eCell, eTissue, ePerson, HealthGRID