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Interoperabilidade técnica em SI para a Saúde

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Interoperability is “good will”

Barriers:
- Different languages
- Different health systems
- Different infrastructures

Appropriate treatment ↔ Access to comprehensible medical information

**Interoperability**: ‘the ability of two or more systems or components to exchange information and to use the information that has been exchanged’

Assets: guidelines, terminologies and architectural specifications
• **European Interoperability Framework (EIF)**
  – Recommendations on how Administrations, Businesses and Citizens communicate with each other within the EU and across Member States borders
  – Four dimensions for interoperability:
    • Legal
    • Organizational
    • Semantic
    • Technical

Comparison of European Health related ICT Projects
• **Decision No 922/2009/EC** - interoperability solutions for European public administrations (ISA)

  – **Interoperability**: ‘the ability of disparate and diverse organizations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between the organizations, through the business processes they support, by means of the exchange of data between their respective ICT systems’
• European Interoperability Framework (EIF)

Comparison of European Health related ICT Projects
Health care provision is a complex process

Interoperability measures how accurately, effectively and consistently health entities exchange clinical information as **Electronic Health Records (EHR)** by **Health Information Systems (HIS)**

Better achieve health sector’s goals

Comparison of European Health related ICT Projects
+ age
+ tech
+ Knowledge
Evolution of Healthcare Systems from Silos to systems

HealthCare Systems....

- **Communities of practice** organized in a systematic way to provide, promote and ensure health to populations

- Complex Adaptive Systems
Aims for Health Care Delivery System

- Equitable
- Safe
- Effective
- Patient-Centered
- Timely
- Efficient

IOM: Crossing the Quality Chasm, 2001
Healthcare Environments are Complex Adaptive Systems

- Hospitals
- Primary care settings
- Patient’s homes
- Neighborhoods & Communities
  – Are each ‘their own little ecosystems’
Life in the Complexity Zone

Degree of agreement
Low
High

Degree of certainty
Low
High

Simple
Complex
Chaotic
Successful Organisations

• Transparent Goals
• Collaborate with Customers – internal and external
• Good at structuring & organising knowledge
• Adaptable
• Allow decision-making near the level of implementation
Diffusion Curve: General

- Early Adopters (13.5%)
- Early Majority (34%)
- Late Majority (34%)
- Innovators (2.5%)
- Laggards (16%)

Everett Rogers, Diffusion of Innovations, 1995
InterOperabilidade Tecnica em SI – The role of SPMS

To learn/prepare...

...To lead...

...By example...
InterOperabilidade Tecnica em SI – The role of SPMS

To learn/prepare...

- Participation in epSOS, eSENS, TriliumB, EU projects (+4 in 2014)
- Create internal skills and organization dynamics on interoperability
  
  Internal Interoperability team/efforts
  Semantic and external interoperability representation/focus
  HL7 Training/ testing – participation in Connectathons

- Organize events with industry to engage and learn needs and readiness
InterOperabilidade Tecnica em SI – The role of SPMS

...To lead...

- Representing Portugal/gov Initiatives
- Foster adoption of Technical standards

  Establishing/helping establishment of “PT” IHE, HI7... other Chapters/subgroups,

- Public Tender for Interoperability providers – Closed

- Inclusion of “interoperability” requirements for IT investment approval and aggregation of SW/application maintenance/evolution contracts to the NHS

- Link with AMA IP – Nationwide efforts in ICT interoperability (eg. Stork 2 project)
EHPCom (
“Bridge to CEF”)

- eHealth assets from different projects
- CEF (available for “mature” domains; with specs which may be used in procurement)

... 2013 2014 2015 2016 ...
InterOperabilidade Tecnica em SI – The role of SPMS

...By example...

- PDS – Use of Technical Interoperability standards
  (links to more than 10 different applications/SW using same technical specs)
  (API development for Patient portal – to link to mobile/other applications)

- Creation of a interoperability layer (HL7 compliant) between SONHO (main hospital admin application – more than 50 hospitals)

- Work towards decoupling application layers – in legacy applications (SONHO vs SAM/Sclinico)

- Developing Semantic Catalogues (CPARA v.2, CPAL, SNOMED CT release center – Pathology-Oncology 1st)
CSP – Medicina geral e familiar

- Gestão da agenda;
- Registo clínico da consulta- SOAP;
- Registo de Programas de Saúde;
- Referencições internas e externas;
- Prescrições;
- Registo de resultados de MCDTs;
- Gestão de alertas;
- Notificações clinicas.
CSP – Registo de dados de Nutrição
Normalização de Registos... CSP e Hospitalar

Diagnósticos/problemas

- ICD 9 – CM; ICD 10 – CM (International Classification of Diseases)
- SNOMED (Systematized Nomenclature of Medicine)
- ICPC-2 (International Classification of Primary Care)
- CIPS (Classificação Internacional de Problemas de Saúde)
- ICNP/CIPE (International Classification for Nursing Practice)

Intervenções/ procedimentos

- ICD-9CM (1,2&3); **ICD-10** CPS; Cod OM
- SNOMED (Systematized Nomenclature of Medicine)
- ICNP/CIPE (International Classification for Nursing Practice)

Reacções adversas/alergias

- CPARA – Catálogo Português de Alergias e Reações Adversas
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InterOperabilidade Tecnica em SI – The role of SPMS

...in to the future...

- SNOMED CT event <10 companies April
- IHE Event ~ 20 companies July
- HL7 Event aim ~ 40 companies Sept/Oct
Sharing is key!