Informing at the new UFP Hospital
playing with information and the digital challenge

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Plan...

• A brief introduction
  – The HE-UFP place
  – The HE-UFP project
  – The HE-UFP facts & numbers

• Playing with information
  – Issues related with those health (hospital) matters

• The digital challenge
  – Why and in what can computers and networks help (getting information digital)
HE – UFP (UFP, Teaching Hospital)
HE-UFP Philosophy of action

• “Assuming that one invests in health and spends in disease, we want to contribute to creating a culture of prevention and preservation of mental and physical well-being, timely controlling and countering as much as possible the extraneous factors that lead to the disruption of the mind / body balance.”

• “Our logic of service and care is therefore primarily pedagogical, investing in a humanized counseling and therapy relationship, compassionate and understanding of the suffering and frailty of patients.”
Where? Near Porto...

• Population: 168,027 (2011 Census)
• Area: 133.26 Km²
• Foundation: 1193 (XII Century)

• Gondomar accounts for 12% of the Porto urban area

• Region (NUTS II): North
• Sub-region (NUTS III) Greater Porto
  – Population: 1,287,276 (2011 Census);
  – Area: 1,024 Km²
Gondomar (population 1801-2011)

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1801</td>
<td>7,220</td>
</tr>
<tr>
<td>1849</td>
<td>19,103</td>
</tr>
<tr>
<td>1900</td>
<td>32,428</td>
</tr>
<tr>
<td>1930</td>
<td>49,758</td>
</tr>
<tr>
<td>1960</td>
<td>84,599</td>
</tr>
<tr>
<td>1981</td>
<td>130,751</td>
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<tr>
<td>1991</td>
<td>143,178</td>
</tr>
<tr>
<td>2001</td>
<td>164,096</td>
</tr>
<tr>
<td>2011</td>
<td>168,027</td>
</tr>
</tbody>
</table>
Close to Porto and the University
Within a 10 minute car ride from UFP
HE-UFP

• Hospital
  – Health care institution providing patient treatment by specialized staff and equipment

• Teaching Hospital
  – Combines assistance to patients with teaching to health students and linked with an University (UFP)

• Private Hospital
  – Means not funded by the public sector and needs to grants his own sustainability

• HE-UFP
  – Means “Hospital Escola” with Escola being the portuguese word for School...
• Property of Fernando Pessoa Foundation
  – The same owners of the University (UFP)
• Hospital area: 40 000+ square meters
  – More than the 34 000 of UFP campus
  – 8 levels, 6 above ground (http://www.youtube.com/watch?v=G5CsPbjrWLo)
• HE-UFP
  – Conception and project by the UFP Architecture Lab
  – Constructed under UFP supervision
• Investment: 50 000 000 euros
  – 2.8% are EU funding for an Intensive Care unit
• Place: Fernando Pessoa Avenue. S. Cosme. Gondomar
• Site: http://he.ufp.pt/
• ...and a Facebook page: https://www.facebook.com/heufp
Some important dates

• July 2009
  – Local authorities agreement

• 4th December 2012
  – Inauguration day

• January 2013
  – Open to public

• Ending July, 2013
  – The first deployment operational phase (IT & Information management)

• HE-UFP, a 3 years project (fast and furious...)
  – Conception, construction & equipped

• 2 years to build
  – See http://www.youtube.com/watch?v=45xfbjYvmHA
Some HE-UFP figures...

- Hospital capacity
  - 200 beds
- Service for
  - Inpatients
  - Outpatients (ambulatory care)
  - External consulting
- General hospital
  - 43 specialist units
- Has an emergency department
  - 24/7 service for urgent care
- Intensive care
  - 60 beds
- 200 people working
  - plans for 400
So...

• It is a new hospital that needs to start from day one (challenge)

• But this allow to think all details to function as a modern hospital (opportunity)
Complex and critical

- Deals with life
- Deals with trust
- Deals with risk
- Deals with information
- Deals with knowledge
- Deals with data
- Deals with (lot of) money
- Deals with dead
• Do you know anything bigger than health matters?
  – Quality of life!
  – Health is a relevant part of it...
Hospital professional groups

- Medical
- Nursing
- Administration
- Physiotherapy
- Pharmacy
- Paramedic
- Technical staff
- IT staff
- Administrative
- Security
- Public Relations staff
- Other?

- Each group with proper:
  - Functions
  - Systems
  - Procedures and standards
  - Priorities
  - Language
  - Rules
  - Information needs
  - Information systems
  - Tools

- Perform, Report, synchronize
- Integrate, relate and share
Still it is a peoples issue
A number of systems

• A complex, multidimensional set of integrated facilities
• Some are analog...
• Other digital
• ...but all need to be integrated and most are highly depended from each another
Hospital ventilation systems
(deal with cross infection in Hospitals)
Security & monitoring
(access control & surveillance)
Medical Imaging systems
(diagnose & create a human atlas)
Data Center (store data for knowledge, get smarter, be intelligent)
New anatomical theaters
(more safe, bidireccional but isolated and for more people)
High tech operating rooms
(for less risk & more medical confort)
Operating department practice
(training operating room & content creation)
Digital calls

• To support, control & produce content (*new!)
  – Diagnose
  – Work
  – Decision
  – Logistics
  – Resources
  – Care
  – Billing

• But also to integrate and relate information
• & turn health professionals life easier and (more) error free
Even traditional profiles are impacted

“Doctor and physician are outdated terms.
I’m your biological tech support specialist.”
But complex challenges emerge (how to balance billing, report and privacy?)
HIS Biggest commercial offers (EUA)

- McKesson Technology Solutions
- Dell, Inc.
- Philips Healthcare
- Cerner Corp.
- Siemens Healthcare
- Epic Systems Corp.
- Medical Information Technology, Inc. (MEDITECH)
- GE Healthcare
- IBM
- Oracle
HIS Developed and/or implemented (PT)

- Alert Life Sciences Computing SA
- Siemens Healthcare
- Indra
- Critical Software
- MedicineOne
HE-UFP adopts Siemens Healthcare
(http://healthcare.siemens.com/)

- Administrative, financial and archiving information systems
- Clinical information systems
- E-health

- The product is *Soarion*
  - A complete HIS (*Hospital Information System*) solution (means: workflow, report, efficiency, standard, certification, and trusted & reliable as keywords)
Need to tailor it

- Integration
- Service
- Cost
- Time response
- Sustainability
- Patients are become clients and can turn relatives / partners / users, depending on health concept adopted... (*new!)
Final remarks

• As in many other contexts, health care is suffering tremendous pressures, in particular:
  – To provide new, better quality and more humane services
  – New demands for more eldering populations
  – Looking for alternative strategies not so based on treatment but more on prevention
  – Always the need to control costs, quality and service
The digital can...

• Help us to
  – Make the move to inform people
    • In more imaginative, pedagogic ways (from training staff to informing patients)
  – Allow better information management
    • For a more efficient and less stressed environment for health professionals

• You also can help us make the change
  – We got an excellent real time, real life environment to study, research and innovate – projects, collaboration and proposals are welcome!
• A visit to the HE-UFP hospital is scheduled for today, 17h30 (there is a list to sign up)