TeleMed and eHealth'08



Integrating eHealth into hospital workflows –

Evidence on the effectiveness of the integrated patient record system at the University Hospitals of Geneva (HUG)

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Overview

- 1. The EU EHR IMPACT study and method
- 2. HUG and the integrated Clinical Patient Record (CPR) system
 - Economic impact: some facts & figures
 - Lessons learnt

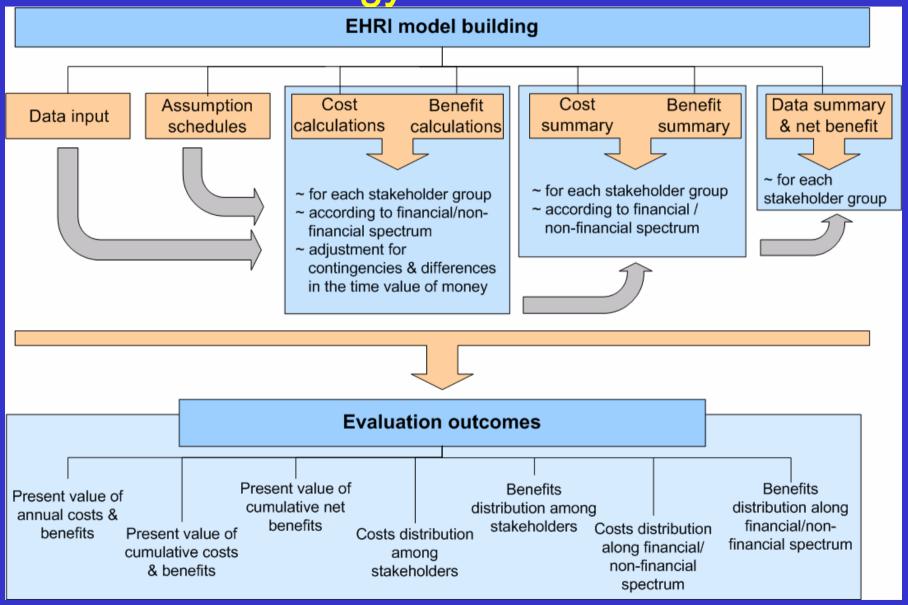
The EHR IMPACT study

Socio-economic impact of interoperable electronic health record and ePrescription systems in Europe

- Identification and analysis of 10 good practice cases
- Policy recommendations to foster their diffusion in Europe
- Method of evaluation:
 - Based on eHealth IMPACT study (<u>www.ehealth-impact.eu</u>)
 - Cost benefit analysis (CBA) from an economic perspective
 - All relevant costs and benefits for all stakeholders
 - Net economic gains

www.ehr-impact.eu

Methodology: the EHRI model



About the University Hospitals of Geneva (HUG)

- Consortium of public and teaching state hospitals
- 9 major facilities in four campuses
- > 30 ambulatory facilities
- · Community, primary, secondary and tertiary care
- > 48'000 inpatients and > 800'000 outpatients yearly
- > 2'000 beds
- > 7'000 care professionals,
- Annual budget of nearly 1.4bn CHF

About the Computerised Patient Record (CPR)

ICT befor the EHRI case

EHRI case

Beyond EHRI (ongoing/planned developments)

Long-term eHealth vision

Diogenes IT system:

- Admission/ discharge/transfer
- Billing
- Human resource
- Stock management

Lab IT system, including ordering

PACS

Not interoperable ICU CPR

First scattered small development trials towards componentbased architecture

New strategy & component-based CIS

Admission, discharge, transfer

Clinical documentation, incl. labs

Medication

Past orders (e.g. drugs, tests, care)

Test results and all images

CPOE, decision support, information modules

Structured nursing record

Patient workflow management

Individual modules at request (e.g. paediatric alerts) Integrated CPOE for physicians and nurses

Unified ward scheduling system

Problem list oriented record

Nursing chart

Drug administration incl. stock management

Knowledge management tools

Network with private hospitals and GPs in Geneva Complete integration of all IT at HUG

Costs and financing of the integrated CPR system at HUG

- Investment contributions from the state
- Operational and maintenance costs born by HUG
- Implementation costs, including users' time
- Extra time spent on ward rounds by doctors
- Omitted income from avoided admissions

Benefits from the CPR system at HUG

Citizens

- Better care because of better informed carers
- Patient safety
- Time saving and avoided admissions

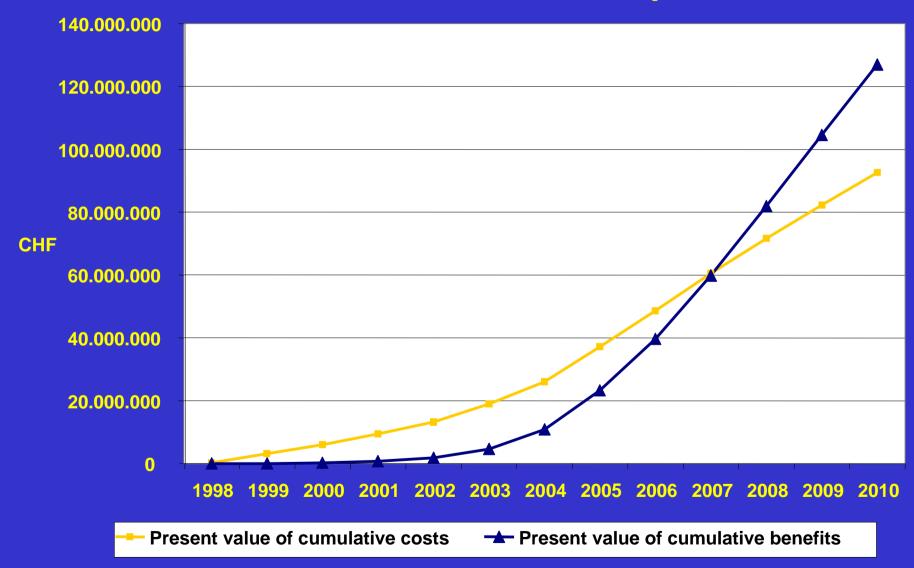
Doctors & nurses

- Nurses do not have to search for doctors
- Life made easier through integrated presentation of different reports
- Doctors do not have to guess while waiting for data
- Do not have to waste time looking for records
- Lower exposure to risk carers feel safer, less vulnerable

Benefits from the CPR system at HUG

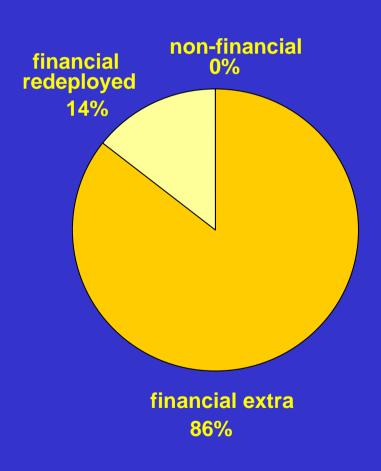
- Benefits to HUG
 - Time savings redeployment of resources:
 - Ward rounds
 - Looking for colleagues
 - Looking for data
 - Writing discharge letters
 - Reduction in exposure to risk due to better clinical governance
 - Critical information is always available where needed
 - Lower risk of errors when transferring patients across HUG sites
 - Some avoided admissions also for insurances
 - Reductions in number of tests
 - Extra income from better billing processes

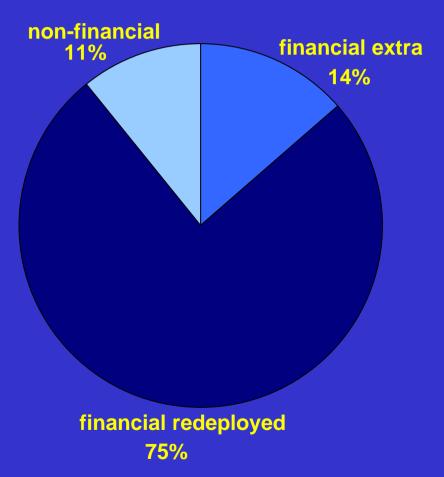
HUG – cumulative *economic* performance



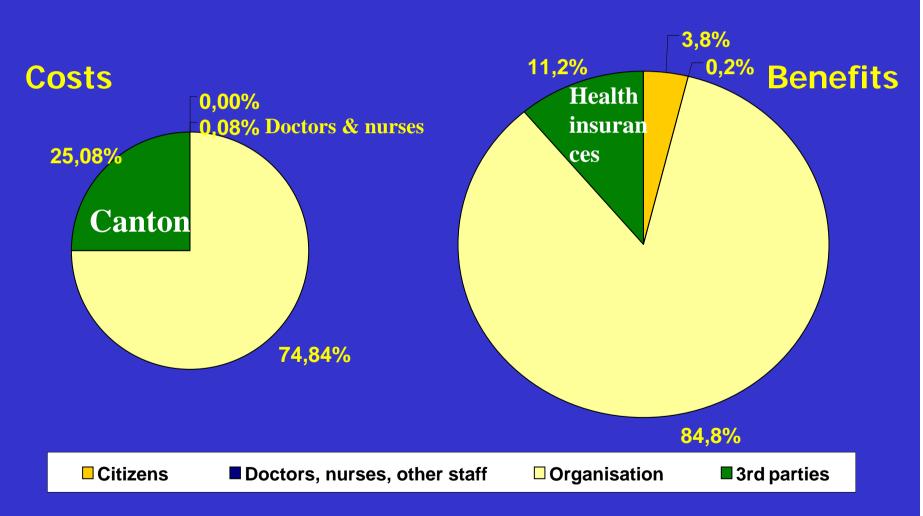
Distribution of costs and benefits: financial versus economic impact

CostsBenefits





Distribution of costs and benefits: economic cases for all



Lessons learnt

- 1. Integrated eHealth in hospitals is worth it
 - But you need deep pockets & lots of patience!
- 2. Focus on benefit realisation, not on IT
 - But know what you can get: quality, not cash!
- 3. Benefits driven by integrating different systems into a comprehensive, EPR-centred HIS
- 4. Know what can go wrong!
 - Realistic change and risk management

Thank you for your attention!

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