Saint-Luc Transformation: Impacted by Belgian Network Regulation?

Renaud Mazy – CEO
University Hospital Saint-Luc
Agenda

- Healthcare evolution
- Saint-Luc University Hospital
- Strategic Plan « Saint-Luc 2025 » - transformation path
  - Vision 2025
  - Optimization
  - EMR and Artificial Intelligence
  - Reconstruction
- Network Regulation impact
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Life expectancy at birth in France from 1740 to 2004

- Napoleonic wars
- 1870’s war
- 1914-1918’s war
- 1939-1945’s war
Health Expenditure

Health expenditure as a share of GDP, OECD countries, 2011

1. Capital expenditure included but not separated out.
2. Capital expenditure not reported.
Growth since 1970

% GDP

Belgium, Canada Quebec, Danmark, France, Germany, Italy, Japan, Netherlands, Sweden, United Kingdom, USA
Subsidies for Academic missions / annual turnover

Germany: 20% (Full estimation)
Canada Quebec: 6% (Incomplete estimation)
Danmark: 6% (Incomplete estimation)
Spain: 9% (Full estimation)
France: 9% (Full estimation)
Netherlands: 34% (Full estimation)
Sweden: 9% (Full estimation)
Switzerland: 20% (Full estimation)
Belgium: 4.6% (Incomplete estimation)

Antares Report 2014

2017 IHFTAIPEI 41st World Hospital Congress
Evolution in number of hospital beds

Justified beds vs licensed beds (CDGEM)
per year BFM, NIC excluded

Difference between licensed and justified beds (J-A)
by bed type (per year BFM)
All healthcare systems should balance 3 following aspects

The three cornerstones

1. Financial sustainability and cost control
2. Preservation of social equity and access to health care
3. Quality of care and improvement in quality of life
Only a few can strike a balance between these 3 aspects

Euro health Consumer index, 2014

<table>
<thead>
<tr>
<th>Quality¹</th>
<th>Access (waiting times)</th>
<th>Total healthcare cost per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>633</td>
<td>Luxembourg</td>
</tr>
<tr>
<td>Netherlands</td>
<td>625</td>
<td>Switzerland</td>
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<tr>
<td>Italy</td>
<td>454</td>
<td>Ireland</td>
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¹ Weighted average index for patient rights, outcomes, range and reach and prevention

Source: Euro Health Consumer Index, 2014; WHO European health for all database
Let’s take a look at 4 different profiles...

**Transparency**
The Netherlands rely on **transparency** to streamline care services and control costs.

**Empowerment**
Sweden **empowers hospitals** to manage quality and volumes through **reimbursement models**.

**Networking**
Norway controls costs by organizing hospitals into **networks and gatekeeping**.

**Streamlining**
Switzerland is moving from an « anything anywhere » model towards a **streamlining** of highly specialized care services.
What about Belgium?

The previous government clearly focused on access to health care and introduced measures to control costs.

This hasn’t led to an improvement in the quality of care.

Purposes of the reform:

- Improve quality of care (notably through the creation of centers of excellence and integrated health services)
- Keep costs to a reasonable level
The actual government has focused on quality and attempts to “pay for quality”

Governmental agreement

- “Institutions encouraging patient involvement in their own treatment and management of health problems are encouraged (....)”
- “A particular focus will be set on the promotion of health education in population (....). We will thus assess how patients can access more easily to their digital records"
- “We will support the most integrated hospitals and inter-hospital networks"
- “Current system of hospital funding will be thoroughly reviewed”
- “We will introduce new methods of financing, encouraging collaboration, coordination and high quality”
- “Precise quality and safety indicators will be integrated"
- “Current system of accreditation will be revised"
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ALL TYPES OF MEDICAL SPECIALTIES WITHIN THE HOSPITAL

908 ACUTE BEDS:
surgery, internal medicine including geriatrics, maternity, psychiatry, pediatrics, neonatology, intensive care...

+ 52 MEDIUM-STAY BEDS

+ 12 LONG-TERM PALLIATIVE CARE BEDS

+ 7 NEONATAL INTENSIVE CARE BEDS
(in neonatology)
Some figures

- Hospitalisation days (acute beds): 246 K
- Consultations: 455 K
- Surgical interventions: 20,4 K
- One Day Clinic and dialysis: 45,4 K
- Emergency admissions: 74,8 K
- Deliveries: 1,77 K
- Average length of stay: 6.2 days

2016
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Strategy: from 2025 onwards...

• The excellence of our care, our clinical research and our teaching will be measured by international quality indicators
• Thanks to the work of our motivated and engaged teams, our hospital will develop its activities in the heart of an integrated network,
• We will operate in a renovated and rebuilt infrastructure and will be financially healthy in order to maintain the high level of innovation in the heart of our project.
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1. Optimization
1. Optimization

Do different, do better, reinvent ourselves

5 axes, 5 P’s:

• **Patients:** Qualité des soins, Sécurité et Satisfaction
  *Patients: quality of care, Security and Satisfaction*

• **Processus efficients**
  *Efficiency*

• **Personnel:** attractivité et motivation
  *HR: engagement and motivation*

• **Performance financière**
  *Financial performance*

• **Positionnement stratégique**
  *Strategical position*
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2. Implementation of Top-notch EMR
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Our TPI² project goal is to provide our medical teams with an EMR (Electronic Medical Record) of the last generation – EPIC solution.

Integrated ICT platform that will allow to manage all patients information: appointments, medical record, billing, etc. Currently, all these topics are dealt with using separate and isolated softwares.

An ICT project?
A Change project!

For all our teams!
An opportunity to develop our excellence in care and research.
The 6 objectives of TPI²’s project

Provide the medical, nursing and administrative teams in contact with patients, with an integrated information system, centered around structured data which enables us:

- **To develop 250 new clinical pathways** in order to ensure increasingly efficient care for patients, to measure the clinical outcomes and to minimize adverse events;

- **To ensure full traceability of resources used** (contributors, drugs, implants, consumables) in all clinical pathways;

- **To optimize the balance sheet** of Saint-Luc through comprehensive and timely billing, as well as optimal coding of services;

- **To interact remotely with patients** through intuitive, direct and user-friendly interfaces;

- **To promote structural and sustainable partnerships** between health institutions through a reference hub which facilitates the sharing of expertise;

- **To increase the academic performance** in research and teaching.
Audit HP: “The different analyzed layers – either Infrastructure or Applications related – can be optimized each separately for small improvements in performance (…) assuming that it is economically and timely reasonable”
Our Goal ➔ accessing the fourth generation ICT tools for the record and the treatment of patient related data

*Computer-based patient record from Gartner*

**Generation 1: The Collector**
- Clinicians — Focus on Usability
- Evidence-Based Medicine
- Consumer — Active Engagement

**Generation 2: The Documenter**
- Clinicians — Active Awareness
- Collaborative
- Predictive
- Precise
- Consumers — Personalized Persuasion

**Generation 3: The Helper**
- New Clinical Platform

Source: Gartner (August 2016)
Our new EMR: Big Data Enabler

✓ Collecting data coming from
  - Medical files / Nursing files
  - Laboratory, Radiology, etc.
  - Patients via connected devices
  - Outcomes

✓ Output
  - Clinical Decision Support
  - Care plan

Our new EMR will allow us to implement a huge number of innovations: connectivity, medical devices, AI, etc.
• This year 2 million women will be diagnosed with breast cancer worldwide
• Therapies available for treatment: more than 800
• To keep up, it would take a physician 160 hours of reading per week!

• 15,000 hours of training by MSK, Watson ingested more than 600,000 pieces of medical evidence, 2 million pages of text, 1.5 million patient records and 26,000 clinical cases

• Watch the video in the next slide
Treatment Options to Consider

Identified Options

**Treatment plan 1**
Systemic Chemo: Cisplatin, Pemetrexed, Bevacizumab
Confidence: 95%
Acceptable match with patient preferences

**Treatment plan 2**
Systemic Chemo: Carboplatin, Pemetrexed, Bevacizumab
Confidence: 45%
Unacceptable match with patient preferences

**Treatment plan 3**
Systemic Chemo: Erlotinib
Confidence: 8%
Preferred match with patient preferences

Radiation and Surgery are unlikely to be appropriate.
Never Offline.
The Apple Watch is just the start. How wearable tech will change your life—like it or not
BY LEV GROSSMAN AND MATT WELLS
Connected devices

Google’s contact lens for diabetics
(measuring blood glucose levels from tears, warning system in case of hyperglycemia).
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3. Hospital 2025
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Saint-Luc has been a trendsetting hospital in Belgium for more than 40 years. It is now time for us to « rethink » ourselves in order to renovate and rebuild.

- Our infrastructure was built for 2000 employees: our actual staff is 5800 people
- We will have to renovate or refurbish numerous places during the 5 to 10 years to come.
- Doctors, nurses, paramedics and support staff: everybody has changed his way of working since the hospital opened it’s doors in 1976
- It is a challenging opportunity: to invent the hospital of the future!
THE DESIGN OF OUR NEW HOSPITAL
WILL INCLUDE THE BEST IDEAS OF THE BEST HOSPITALS AROUND THE WORLD

INCREASE OF OUTPATIENT CARE
TAILOR MADE MEDICINE
INCREASING FOCUS ON PREVENTION
MOBILE, ACCESSIBLE AND VIRTUAL HOSPITAL

The hospital of the future will be flexible and evolutive

The hospital of the future will include the future technologies and new medical areas

Needs to be more « patient-centric », will optimize patient pathways and ensure a better coordination of all experts
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Future Network Regulation Impact

- Need for Network implementation anticipated as part of our Vision 2025
- Optimizations and standardizations to be implemented across sites
- New Clinical pathways to be defined with all medical teams
- EPIC solution to be “offered” to our network sites
- Clinical trials to be boosted
- Reconstruction: future number of hospital beds to be adjusted
Thanks for your attention!