

# Hospital Perspective on using Registry Data for HTA

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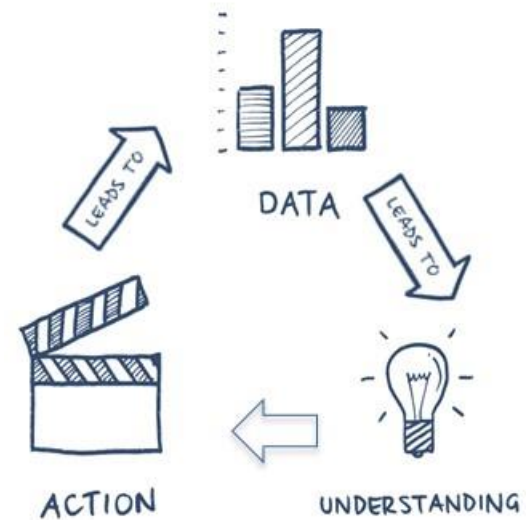
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Fondazione Policlinico Universitario Agostino Gemelli IRCCS  
Università Cattolica del Sacro Cuore



# Agenda

1. Hospital Perspective: The Context
2. Registry Data (now) for HB-HTA
3. Resolved and unresolved issues
4. The registry of the future?
5. Promote integration for the future
6. Conclusions

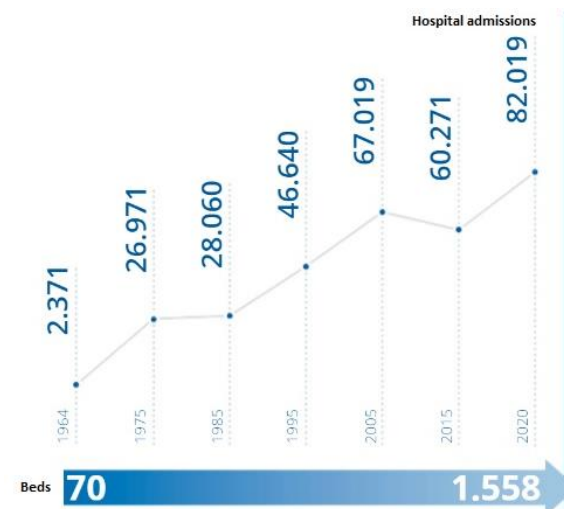


# Hospital Perspective: The Context

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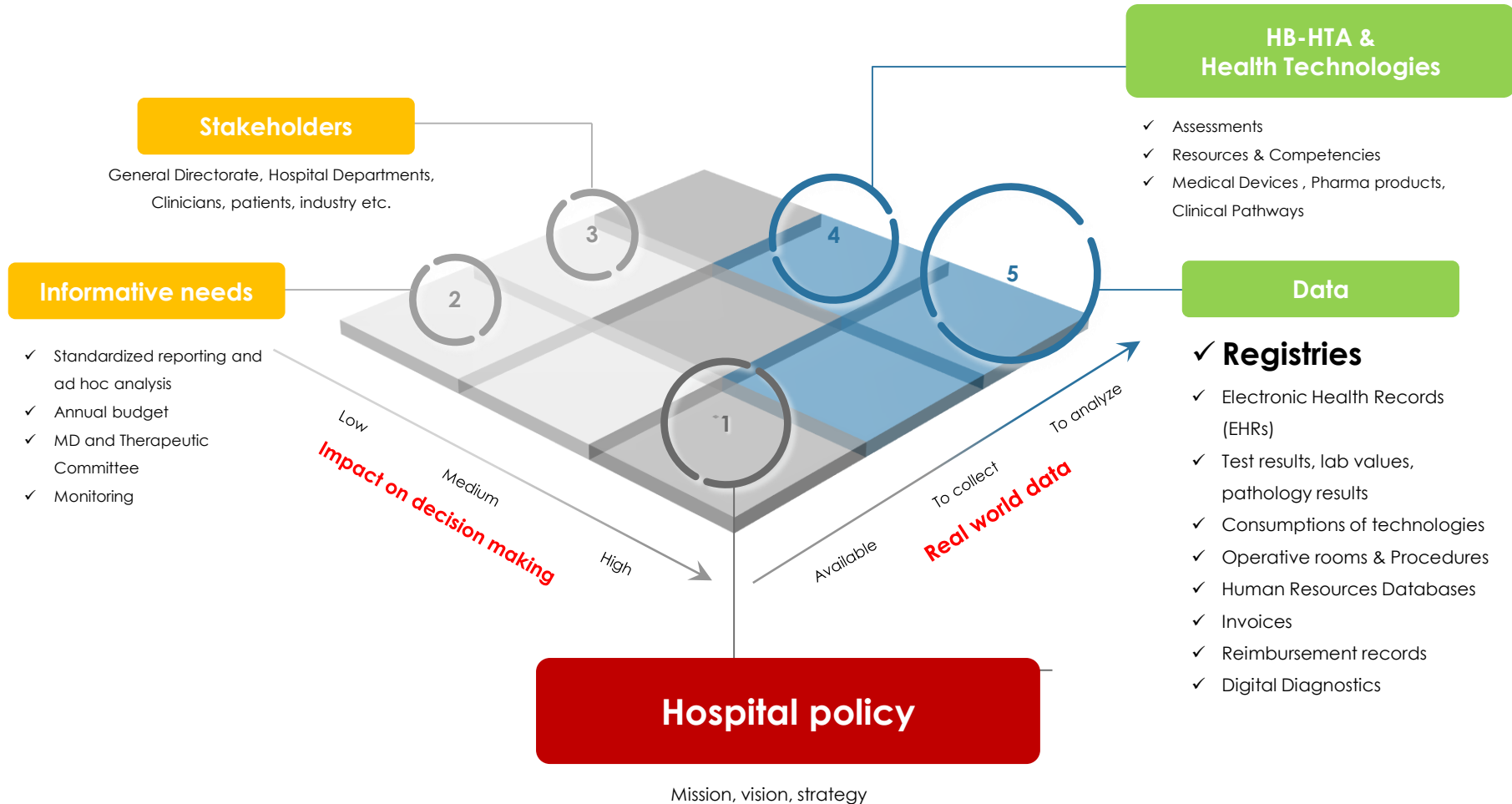


- Founded in 1962
- Private hospital accredited to NHS
- Since March 2018: Scientific Institute for Research and Healthcare
- Personalized Medicine and Innovative Biotechnologies
- Translational medicines
- Multidisciplinary approach
- Big data



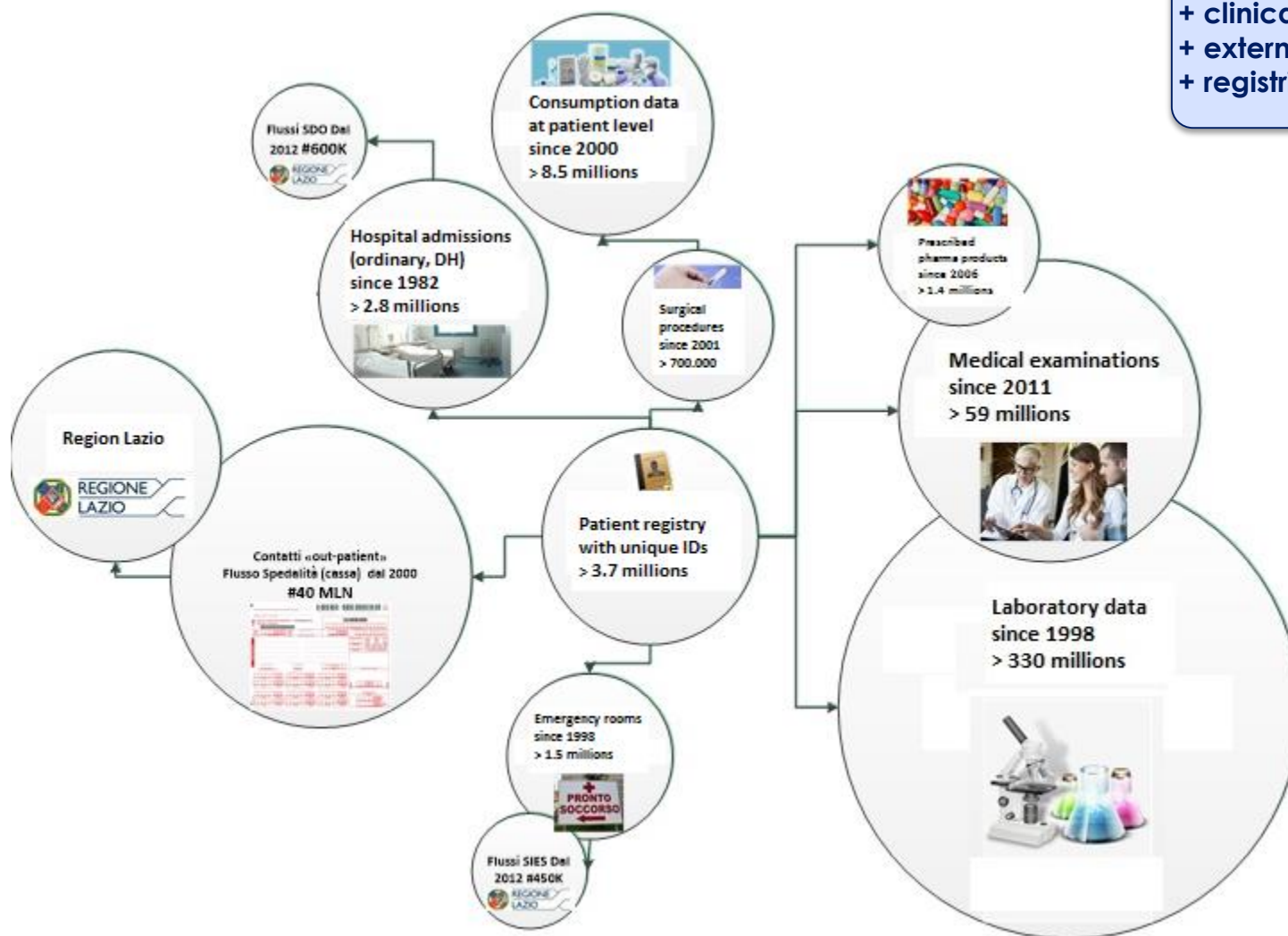
- The Unità di Valutazione delle Tecnologie (UVT) (Health Technology Assessment (HTA) Unit) was established in 2001.
- The UVT mission is:
  - To counsel top management in decisions making on resource allocation, using transparent, fair and consistent evaluation process;
  - To support clinical practice by promoting the implementation and utilization of Clinical Governance logics and tools within the clinical care units;
  - To conduct research projects and training activities in the HTA and Clinical Governance areas.

# Hospital Perspective: The Context



# Hospital Perspective: The Context

- + clinical registries
- + external registries
- + registries for research



# Registry Data (now) for HB-HTA



Vision paper on the sustainable availability of the proposed Registry Evaluation and Quality Standards Tool (REQueST)

Registries have been defined as an

“**organized system** that **collects, analyses, and disseminates** the data and information on a group of people defined by a particular disease, condition, exposure, or health-related service, and that serves **predetermined scientific, clinical** or/and **public health (policy) purposes**”

**Hospital policy**

**Usage issues**

**Fragmentation**

**Timing**

**Outcomes**

**Follow up**

# Resolved and unresolved issues

Analysis	Title	RWD related to	Conclusions	Pros/Cons
Pragmatic clinical trial (2008)	The harmonic study: cost-effectiveness evaluation of the use of the ultrasonic scalpel in total thyroidectomy	198 patients, randomized to either surgery with the ultrasound scalpel (n = 96) or traditional (n = 102) and followed for 3 months after hospital discharge	Allowing an overall saving of 325.36 EUR per patient, Ultrasound scalpel should be adopted for Total thyroidectomy procedures in the "A.Gemelli" University hospital	<b>Pros:</b> RWD <b>Ad hoc data collection</b> on resource consumption in operative rooms and on <b>outcomes</b>  <b>Cons:</b> <b>Timing</b> (2 years from protocol to publication)
Multidimensional retrospective analysis (2010)	Costs of bloodstream infections caused by Escherichia coli and influence of extended-spectrum-beta-lactamase production and inadequate initial antibiotic therapy	1-year analysis of 134 consecutive Bloodstream Infections Caused by Escherichia coli	Findings confirm that the hospital costs and mortality associated with E. coli BSIs are significantly increased by Extended-Spectrum-β-Lactamase Production and Inadequate Initial Antibiotic Therapy	<b>Pros:</b> data were obtained from: hospital discharge records, accounting system  <b>Cons:</b> Timing Perspective (retrospective) <b>Interpretation of results by internal decision makers</b>



## Hospital data warehouse Business intelligence



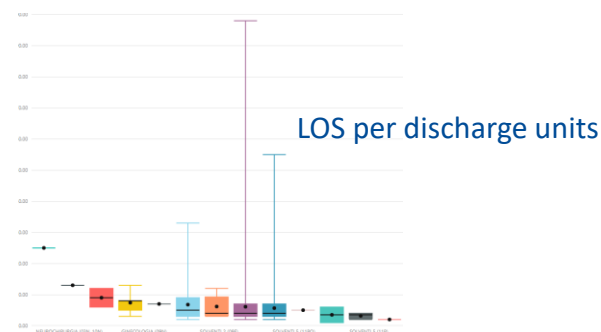
# Resolved and unresolved issues

## Case study: clinical pathways

Preliminary results showed a great variance for the same intervention/procedure concerning:

- ✓ length of stay (3-8 days)
- ✓ waiting times (1-4 days)
- ✓ innovative technologies costs (2000-6000€)
- ✓ obsolete reimbursement rates (2000-5000€) that do not guarantee adequate economic contribution margins.

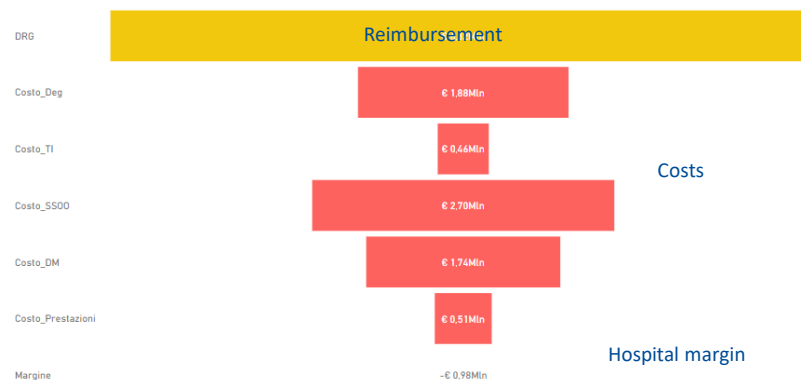
## Organizational impact



## Involved technologies

DESC_ARTICOLO	quantita_utilizz	costo_totale
0061755_COPRILETECAMERA 15X250CM_UJET Srl	500,00	1.129,66
02700626_GVL STAT3 LAMA GUIDESCOPE 80MM_VERATHON MEDICAL ITALIA	18,00	417,24
02700628_GVL STAT4 LAMA GUIDESCOPE 95MM_VERATHON MEDICAL ITALIA	10,00	231,80
060746_TELIO CHIRURGICO TNT 50X75 CON FORO (300)	12,00	10,56
10495_KIT JACKSON PRATT (10)	8,00	224,48
10-5185EU_COPERTURA CUFF STER C/EL 56CM_NOVAMEDISAN ITALIA Srl	78,00	186,42
1059P_MASCHERA BLB ADULTI C/ VALVOLE X ALTA C.O2	1,00	0,66
111470006 PORTAGHI GRANDE DA VINCI Xi_AB MEDICA	2,80	19.547,08
111470015 TELIO BRACCIO STRUMENTO DA VINCI Xi_AB MEDICA	938,00	136.178,84
111470093 PINZA PROGRASP DA VINCI Xi_AB MEDICA	20,10	140.320,11
111470179 HOT SHEARS FORBICE MONOPOLARE DA VINCI Xi_AB MEDICA	23,10	235.139,52
111470205 PINZA BIPOLARE CON OCCHIELLO DA VINCI Xi_AB MEDICA	23,80	204.775,20
111470341 TELIO COLONNA SISTEMA DA VINCI Xi_AB MEDICA	233,00	14.979,57
111470361 RIDUTTORE UNIVERSALE CANNULA 5-8 MM DA VINCI Xi_AB MEDICA	940,00	47.764,01
1150901_LEADER CATH ARTERIOSEL FR3 8CM_VYGON ITALIA Srl	525,00	11.780,98
117055_TUBO ARM MANDR PRE INSE_COVIDIEN ITALIA SpA	1,00	7,81
117070_TUBO ARM MANDR PRE INSE_COVIDIEN ITALIA SpA	10,00	78,10
1206310507M_MEDS FARMAPORE 5X7CM 50PZ_FARMAC-ZABBAN SpA	304,00	9,94
1208220071_ZAFFI GINECOLOGICI 5X5 IODOFORMICI	4,00	10,24
12808_ALTERNA POSTOP SAC 10/70 12808_COLOPLAST SpA	27,00	278,05
130500/7060_ENDOJACK MANIP UTERINO 70MM_MOVI SpA	11,00	471,13
4200323_GIOIELLI NASTRO ELASTICO PER GIUNTA DAVYER S.A.	140,00	72.373,00

## Substainability



Outcomes

Internal & External registries



# The registry of the future?

2016

**The registry of the future: Leveraging EHR and patient data to drive better outcomes**



2018



2020

**Leveraging Existing Tools in Electronic Health Record Systems to Automate Clinical Registry Compilation**



2020



**Population-Based Registry Linkages to Improve Validity of Electronic Health Record-Based Cancer Research**

# The registry of the future?

## CREATE database

1. **Clinical Registry**
2. **Administrative Data**
3. **Electronic Medical Records**

**Next Generation Registry Platform**



CJC Open 3 (2021) 639–645

### Study Design

### CREATE: A New Data Resource to Support Cardiac Precision Health

#### Databases:

1. **Alberta Provincial Project** for **Outcome Assessment in Coronary Heart Disease (APPROACH)**; a national clinical registry)
2. **Sunrise Clinical Manager (SCM)** electronic medical record (city-wide)
3. **Discharge Abstract Database (DAD)**
4. **National Ambulatory Care Reporting System (NACRS)**

# Promote integration for the future

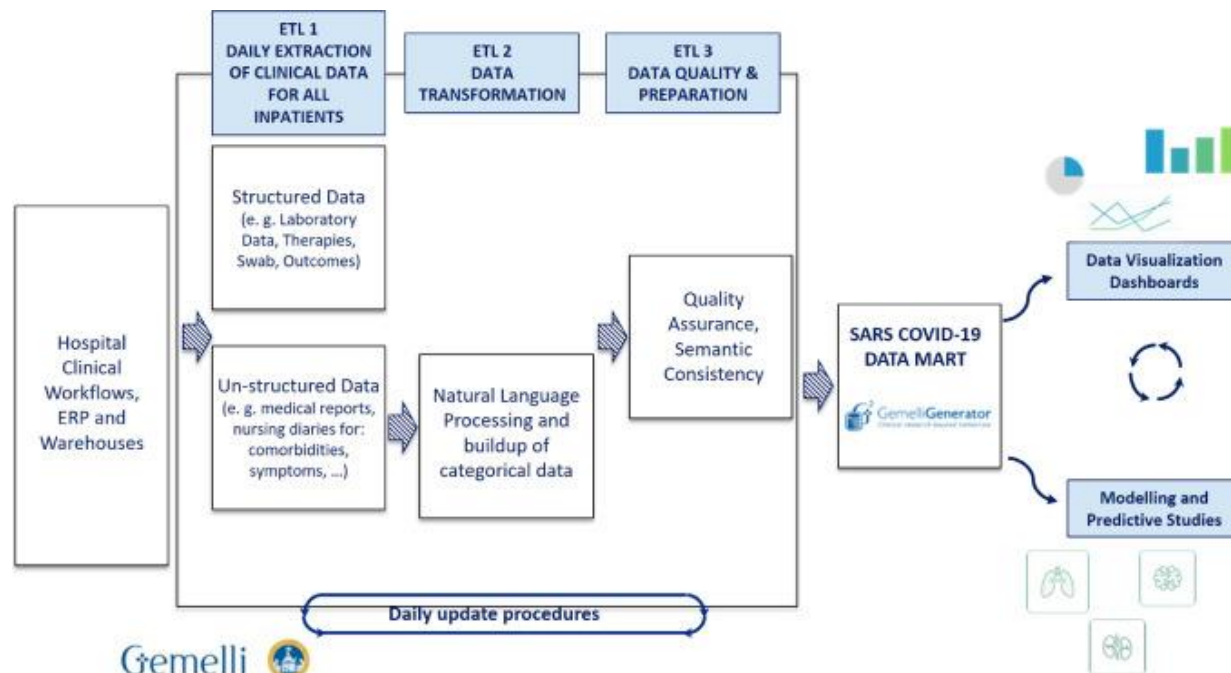


## Clinical & Managerial Relevance

*Artificial Intelligence and Big Data processing services for the integration of clinical data and the development of predictive models to **support diagnosis, therapies and clinical processes.***



A real-time integrated framework to support clinical decision making for covid-19 patients



# Conclusions

## Hospital Perspective



Informative needs

Hospital policy

Hospital decision making

## on using for HTA



Not a matter of  
competences or  
expertise

## Registry Data



**Clinical & Managerial**  
Relevance

Internal & **External**  
registries

Promotion and planning  
of **Integration**

**Next Generation Registry Platform**

**Next Generation  
Hospital DataWareHouse**

# Thanks for your attention

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