



The Hospital performance: the use of a benchmarking tool

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- Lisboa -



Manuel Delgado – 24th July 2014

Strategic challenges in health systems

Long-term balance between revenue and expenses.

- **CHALLENGE:** Promoting Quality and increasing Efficiency.

SUSTAINABILITY

ACCOUNTABILITY

INNOVATION

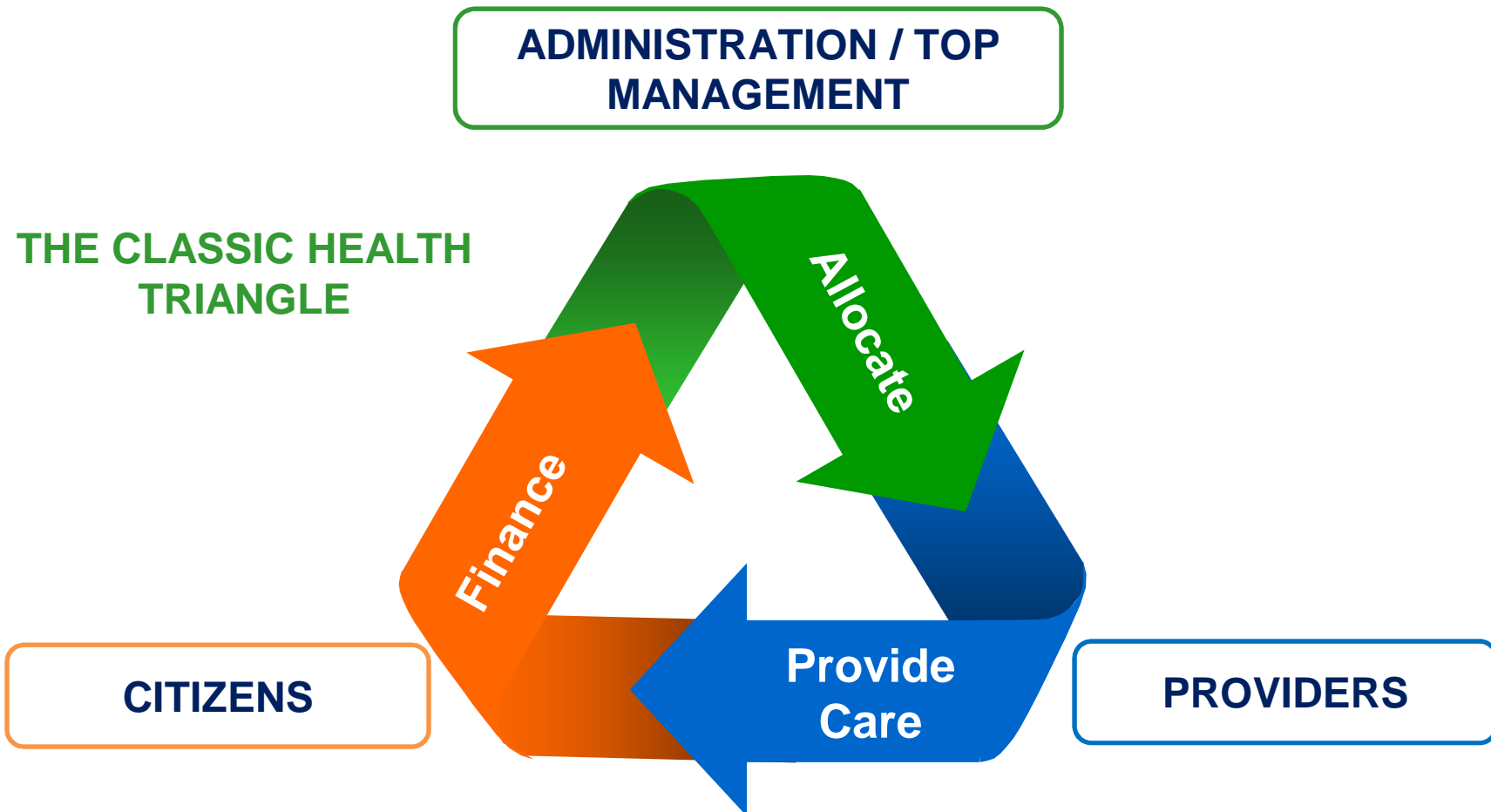
Ability to incorporate new knowledge and new technology in the clinical practice.

- **CHALLENGE:** Properly select innovation to meet the needs of the population, avoiding under-utilization or over-utilization.

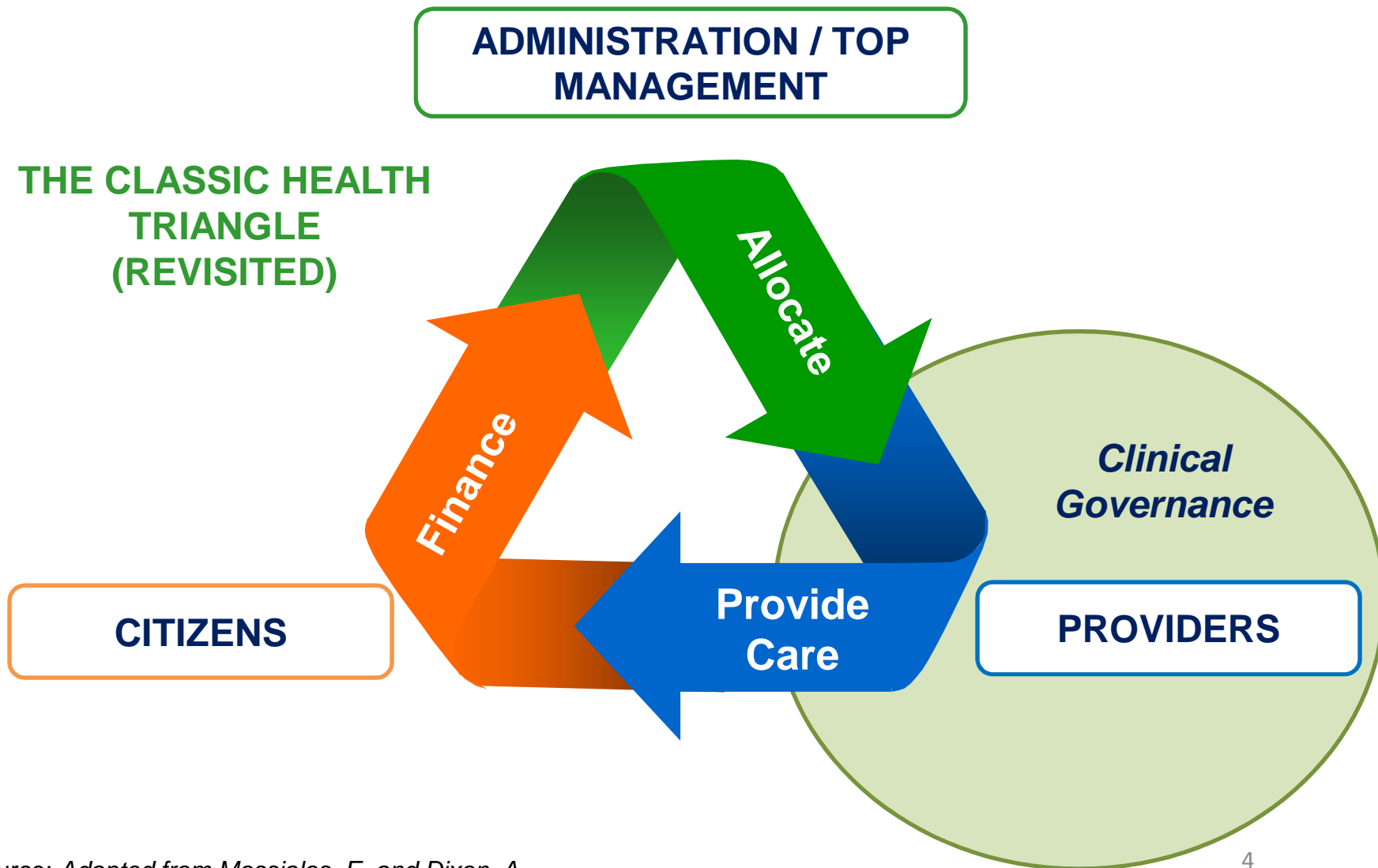
Demonstrate, systematically and objectively, the adequate use of resources.

- **CHALLENGE:** Create a common language of performance and benchmarking indicators.

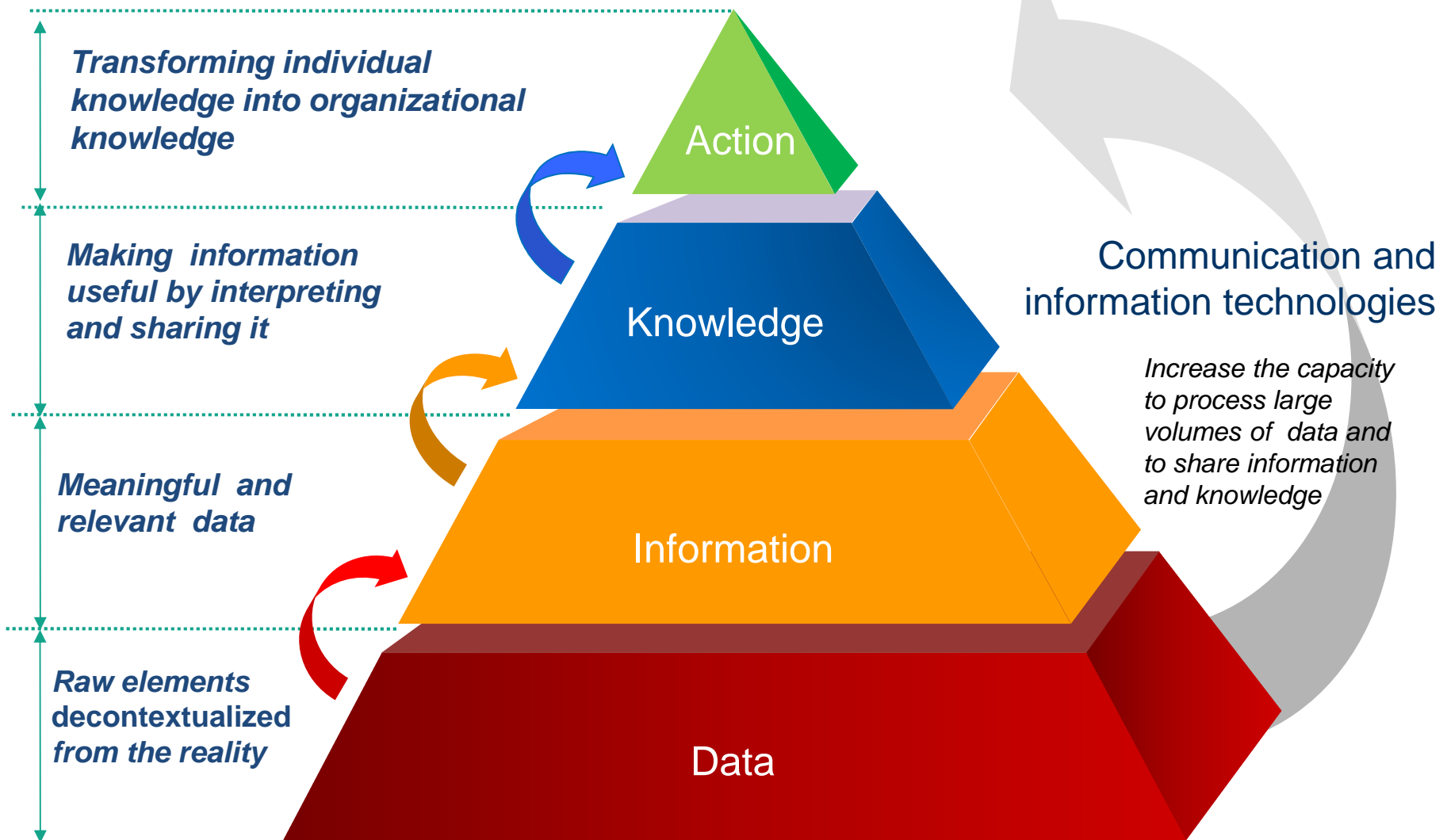
Strategic challenges in health systems



Strategic challenges in health systems

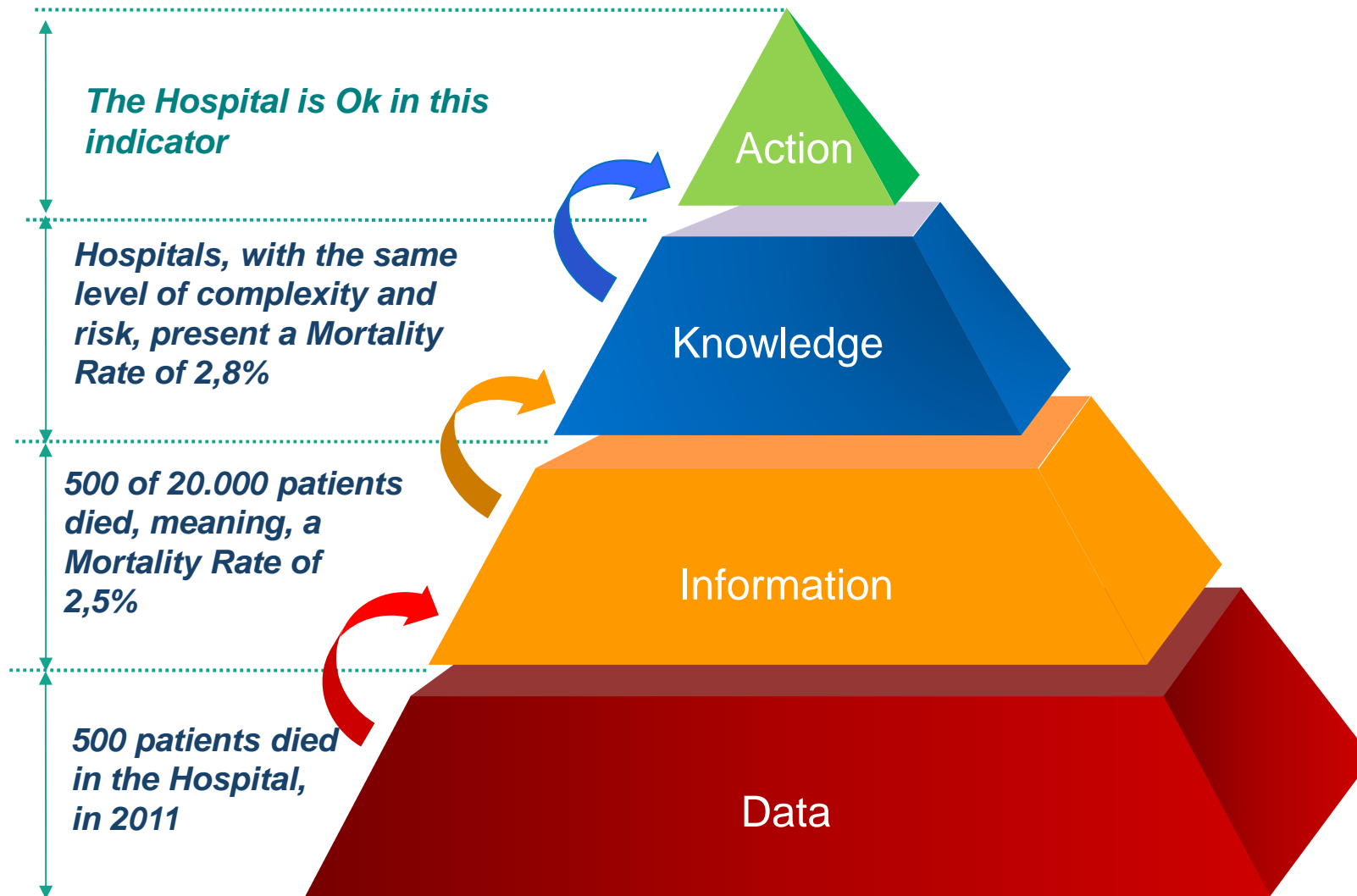


From data to Knowledge



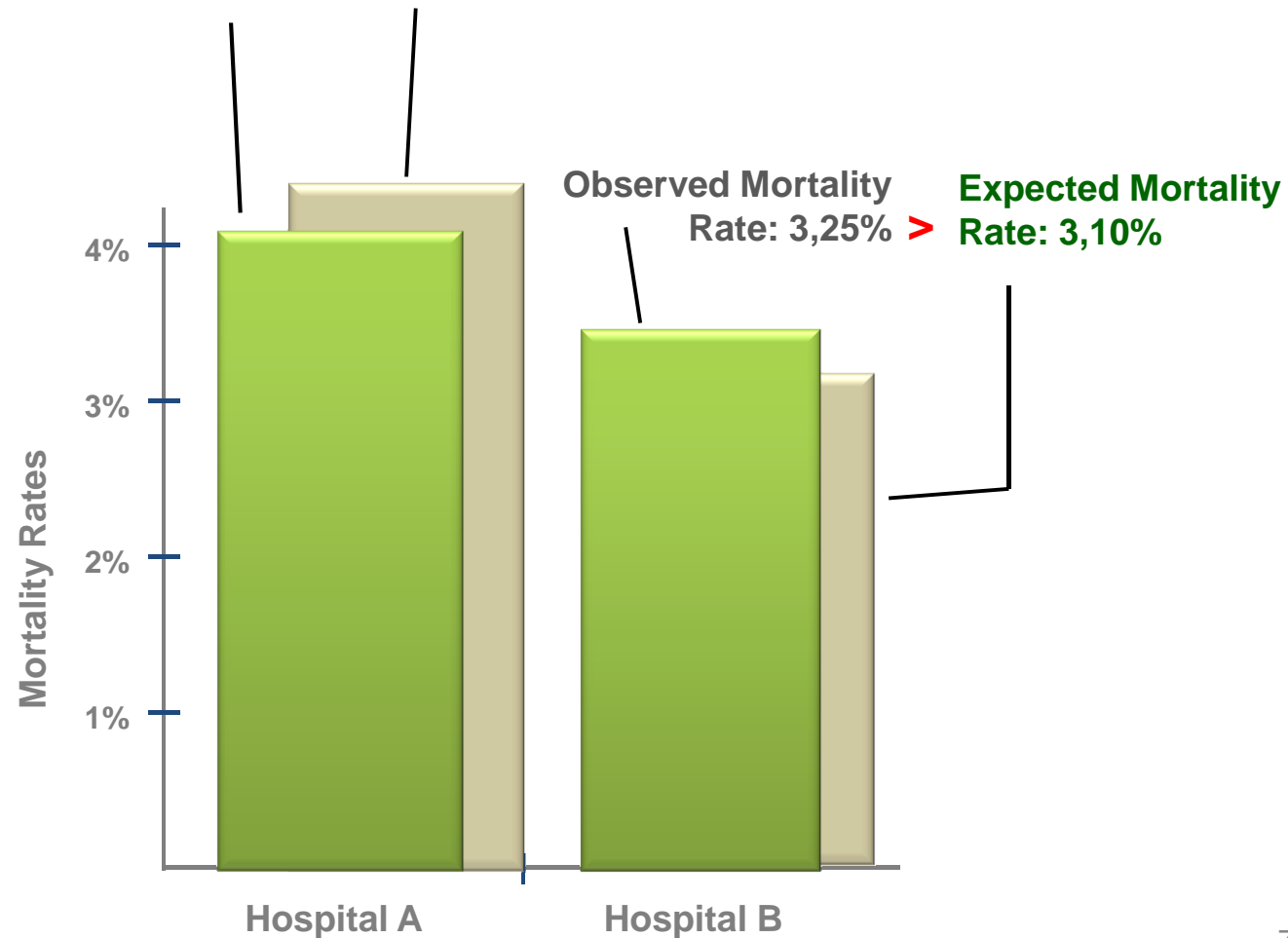
From data to Knowledge

Example:



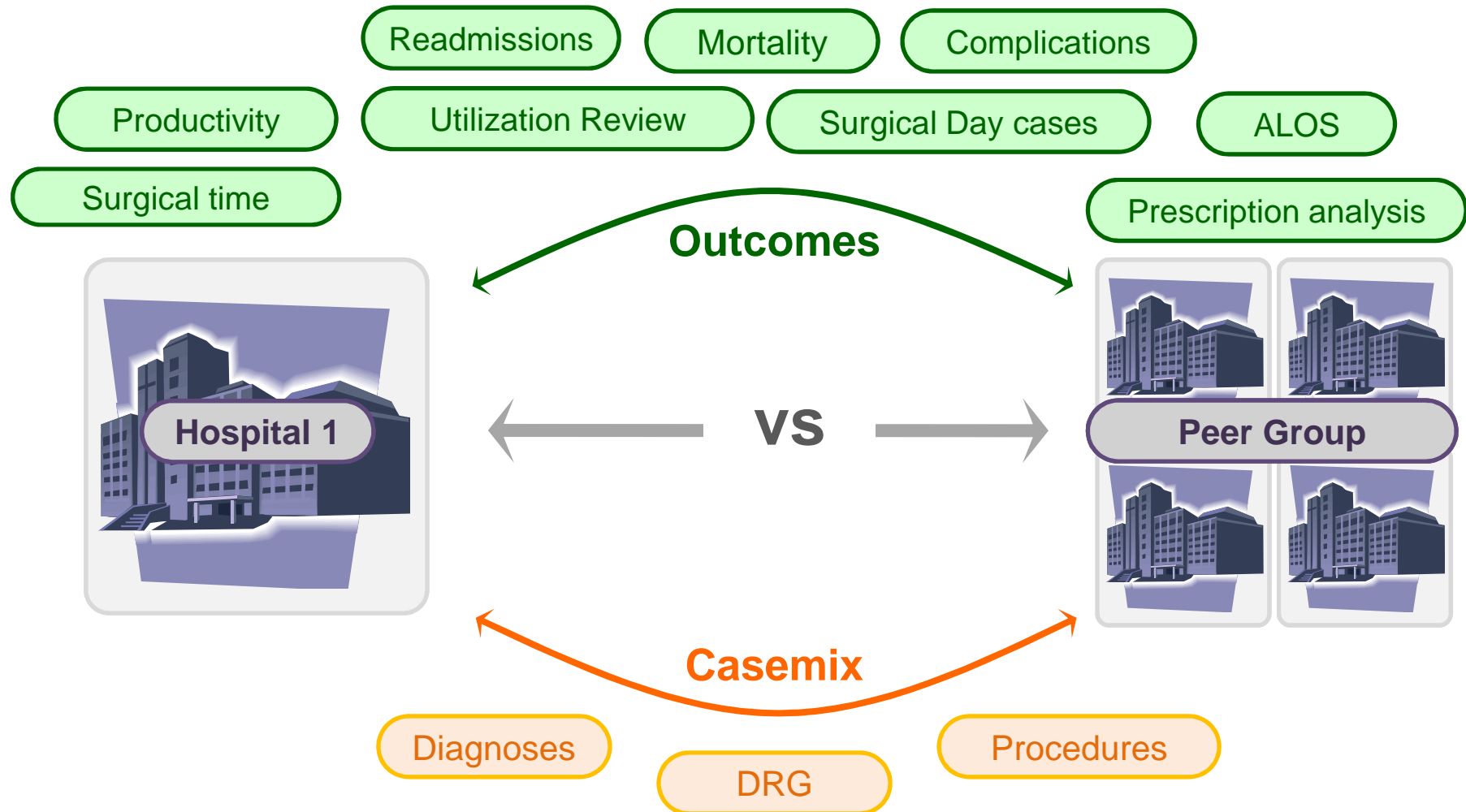
Risk adjustments indicators

Observed Mortality Rate: 4,10% < Expected Mortality Rate: 4,50%



A value proposition: clinical benchmarking

Only what gets measured gets managed



Project's main assessment areas

- ▶ How **different** are **patients** treated amongst participant hospitals?
- ▶ Are **admission patterns** from **Emergency Room** the same across hospitals?

- ▶ Which are the **hospital bed days excess / savings**? How many yearly beds account for?
- ▶ Are those days excess / savings **before or after a surgical intervention**?

Casemix

Efficiency

Appropriateness

Quality

- ▶ Are hospital admissions the ones expected?
Is the hospital admitting **Ambulatory Care Sensitive Conditions** more than its peers?
- ▶ Are there **inpatient procedures** that should be performing as **day cases**?

- ▶ Does the hospital show more **deaths, complications** or unscheduled related **readmissions** than those expected?
- ▶ How is the hospital profile regarding **Patient Safety** indicators?

Dimensions of analysis

Descriptive

Data quality

- % of “problematic” DRGs
- Diagnostics by discharge (N)
- Discharges without diagnosis

Demand

- Hospital activity summary
- DRGs list

Severity

- Case-mix index (DRG)
- Procedures / pathologies (DRG) that increase / decrease the complexity

Efficiency

Length of Stay Management

- LOS observed
- LOS expected

Pre-Op. LOS Management

- Pre-Op LOS observed
- Pre-Op LOS expected

Ambulatory Surgery

- % of observed ambulatory surgeries
- % of expected ambulatory surgeries

Quality

Mortality

- Observed Mortality
- Expected Mortality

Complications

- % of discharges with complications observed
- % of discharges with complications expected

Readmissions

- Observed Urgent Readmissions
- Expected Urgent Readmissions

Triple vision of the Results

Appropriate **contextualization** of the results requires a three-dimensional analysis:

Descriptive

What are the clinical outcomes of your Hospital/ Services/ Departments?

Comparative

How is your hospital performance, comparing with similar ones?

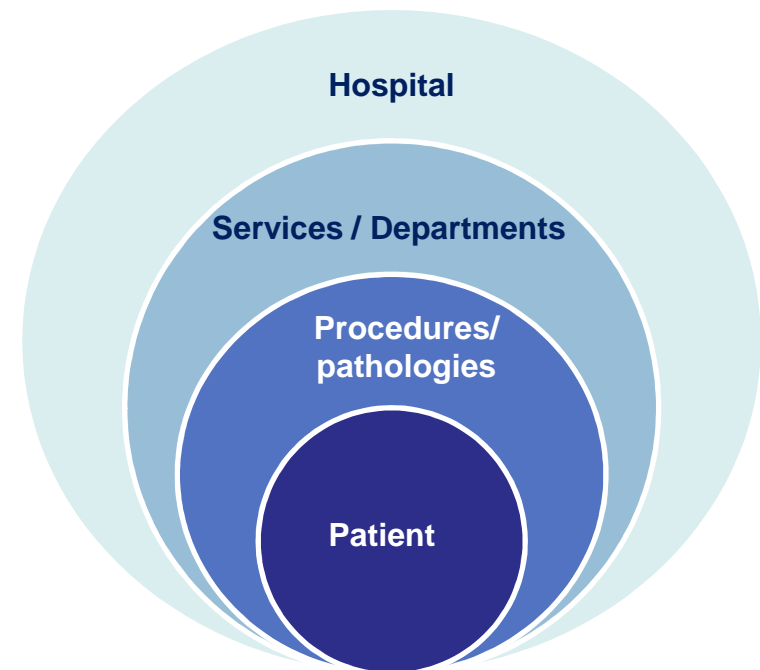
Time

How is your performance evolving over time?

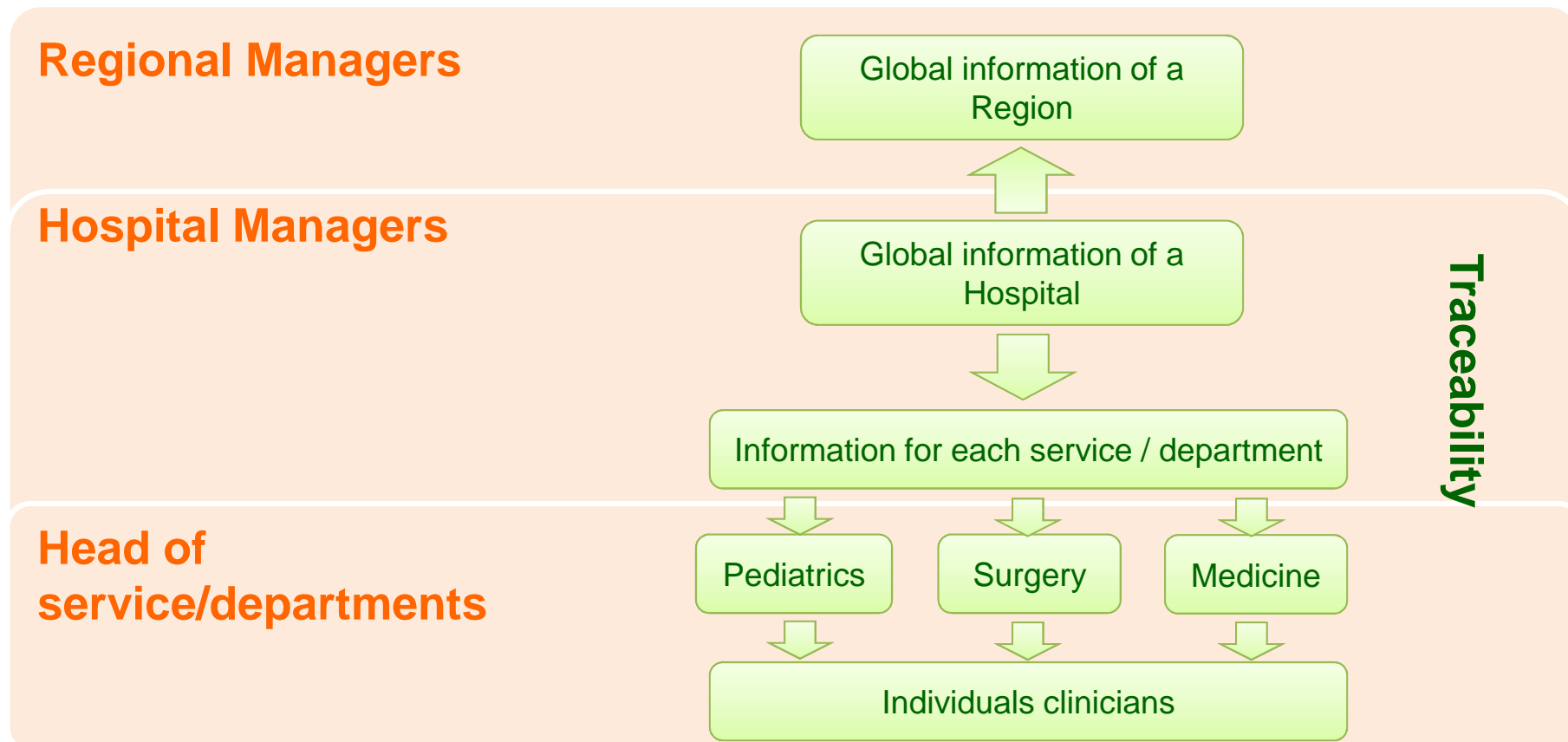
Each user can select the intensity of performance comparison (*Peer Group* or *Benchmark*)

Each user selects the desired period of analysis

Levels of analysis



Multiples levels: personalized reporting



Case study

Patient Safety - Agency for Healthcare Research and Quality (AHRQ)

20 Indicators

- Complications of Anesthesia
- Death in Low-Mortality DRGs
- Decubitus Ulcer
- Foreign Body Left During Procedure
- Iatrogenic Pneumothorax
- Failure to Rescue
- Selected Infections Due to Medical Care
- Postoperative Hip Fracture
- Postoperative Hemorrhage or Hematoma
- Postoperative Physiologic and Metabolic Derangements
- Postoperative Respiratory Failure
- Postoperative Pulmonary Embolism or Deep Vein Thrombosis
- Postoperative Sepsis
- Postoperative Wound Dehiscence
- Accidental Puncture or Laceration
- Transfusion Reaction
- Birth Trauma – Injury to Neonate
- Obstetric Trauma – Vaginal with Instrument
- Obstetric Trauma – Vaginal without Instrument
- Obstetric Trauma – Cesarean Delivery



Patient Safety – Hospitals Selection

University Hospitals (Level V)

- Centro Hospitalar do Porto
- Centro Hospitalar Lisboa Norte
- Centro Hospitalar Lisboa Central
- Centro Hospitalar de São João
- Centro Hospitalar Vila Nova de Gaia/ Espinho

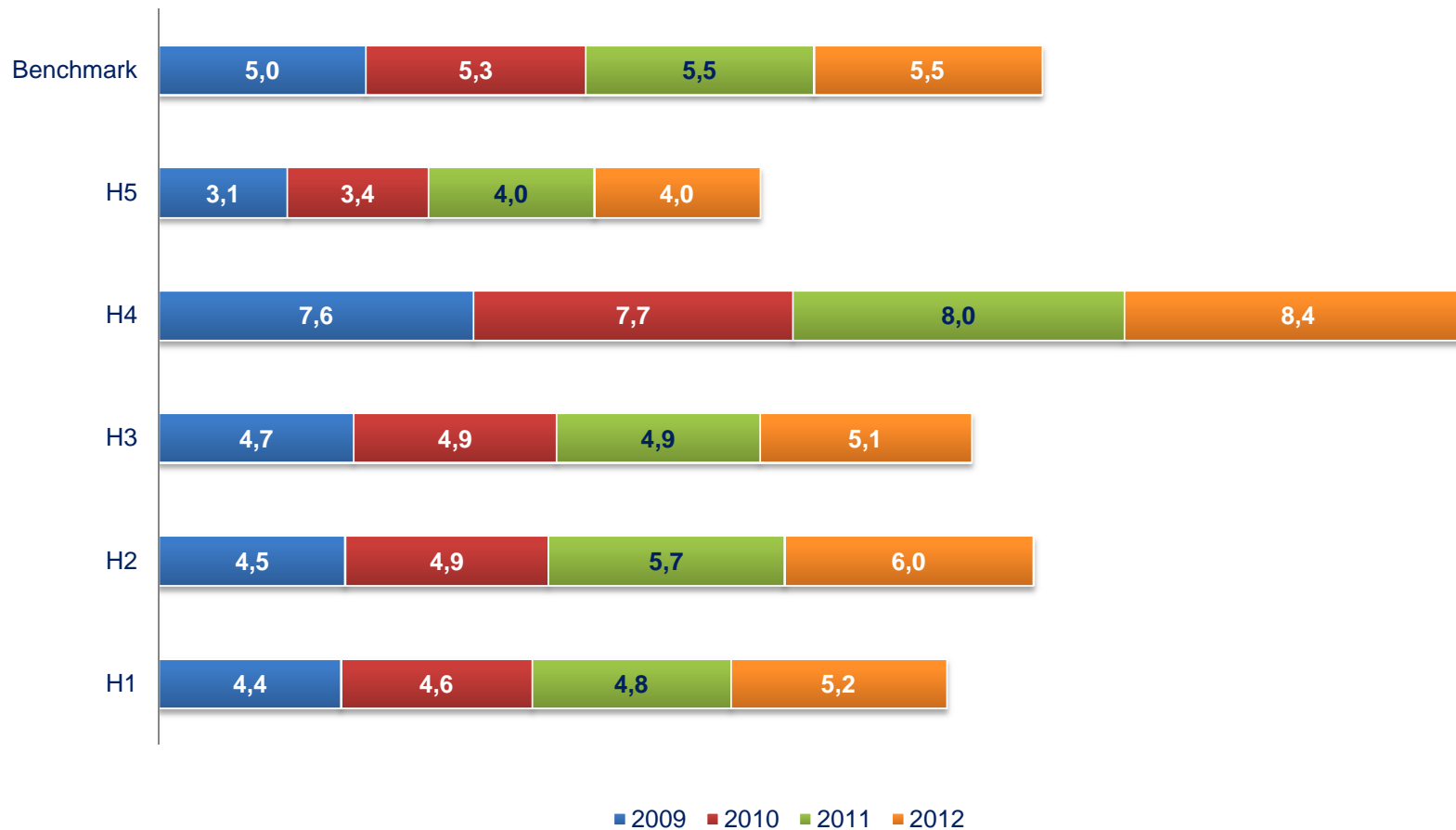
Data Base

- Portuguese inpatient DRG data base (2009-2012)

	Inpatients discharged (2012)	Average Length of stay	Case-mix index	Number Services	Number Beds
Min	20.572	6,7	1,25	28	588
Max	49.431	9,1	1,94	60	1.428
Average	34.341	7,9	1,53	37	948

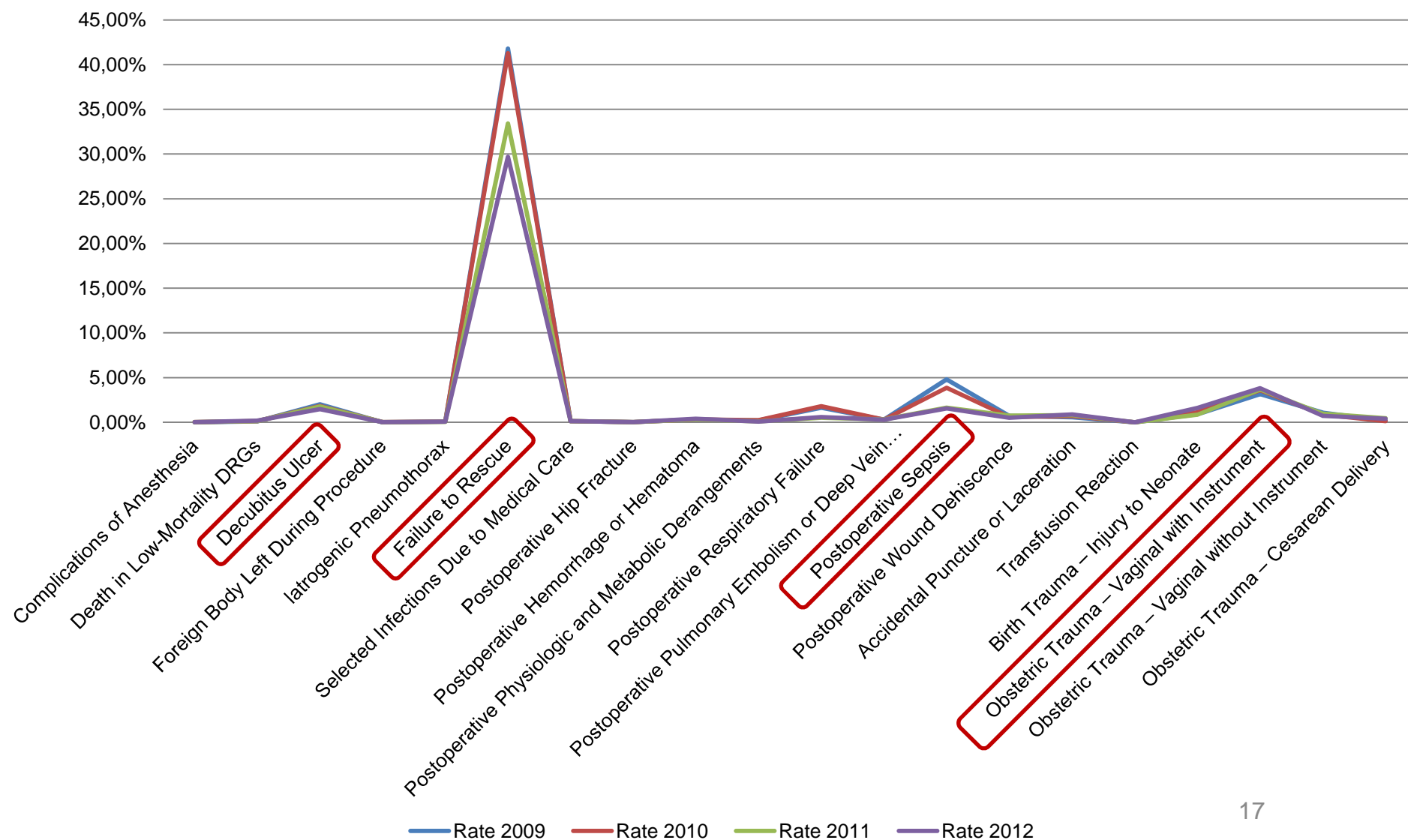
Patient Safety – Hospitals inpatients discharge and Diagnostics registered/codify

Diagnostics registered/codified by discharge



Patient Safety – Patient safety indicators (rate of adverse events in %)

Patient safety indicators :Evolution 2009-2012 in five selected hospitals

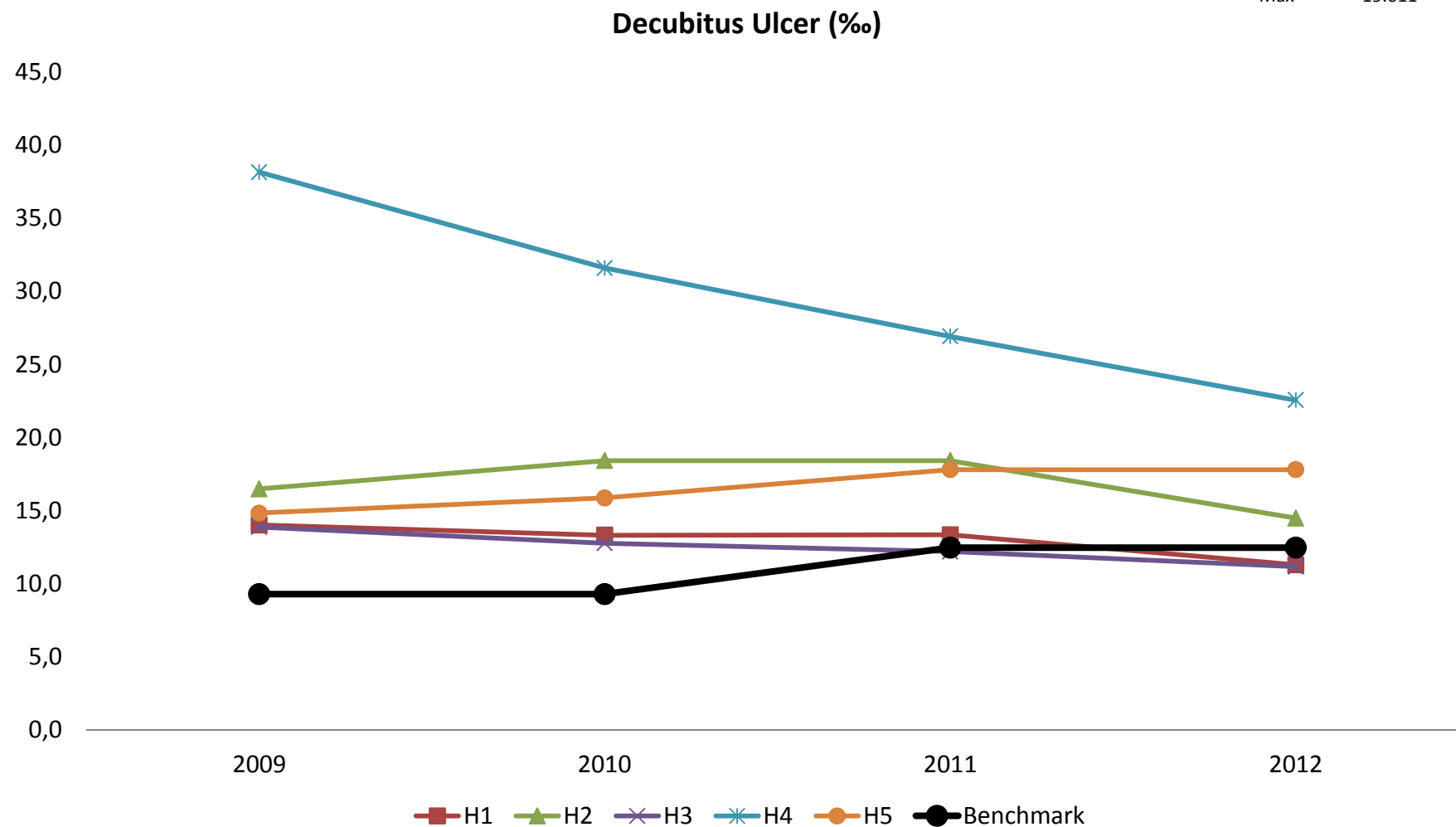


Patient Safety – Patient safety indicators (Decubitus Ulcer)

Nº of cases analyzed (2012)

Min 9.298

Max 19.611

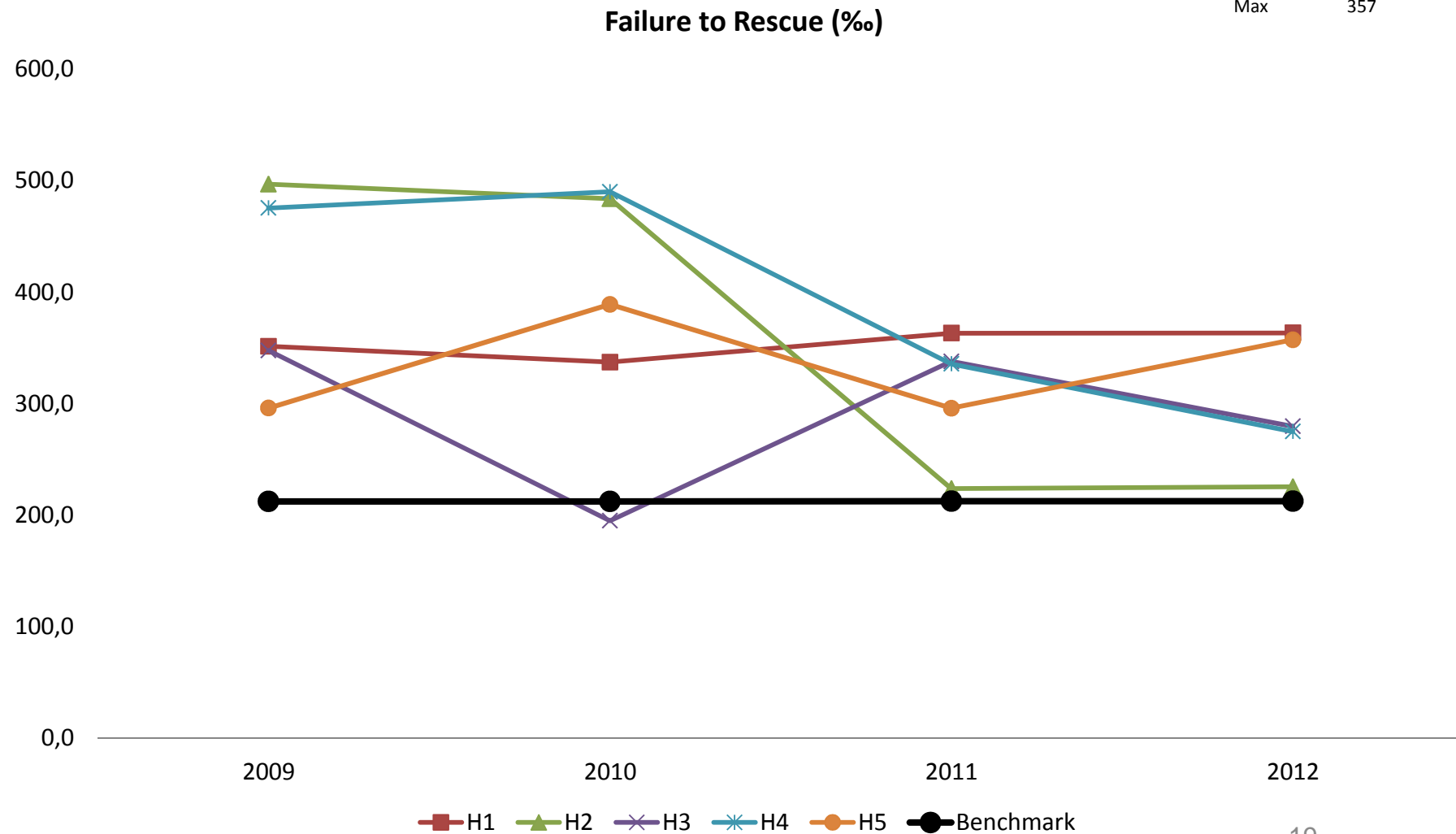


Patient Safety – Patient safety indicators (Failure to Rescue)

Nº of cases analyzed (2012)

Min 225

Max 357

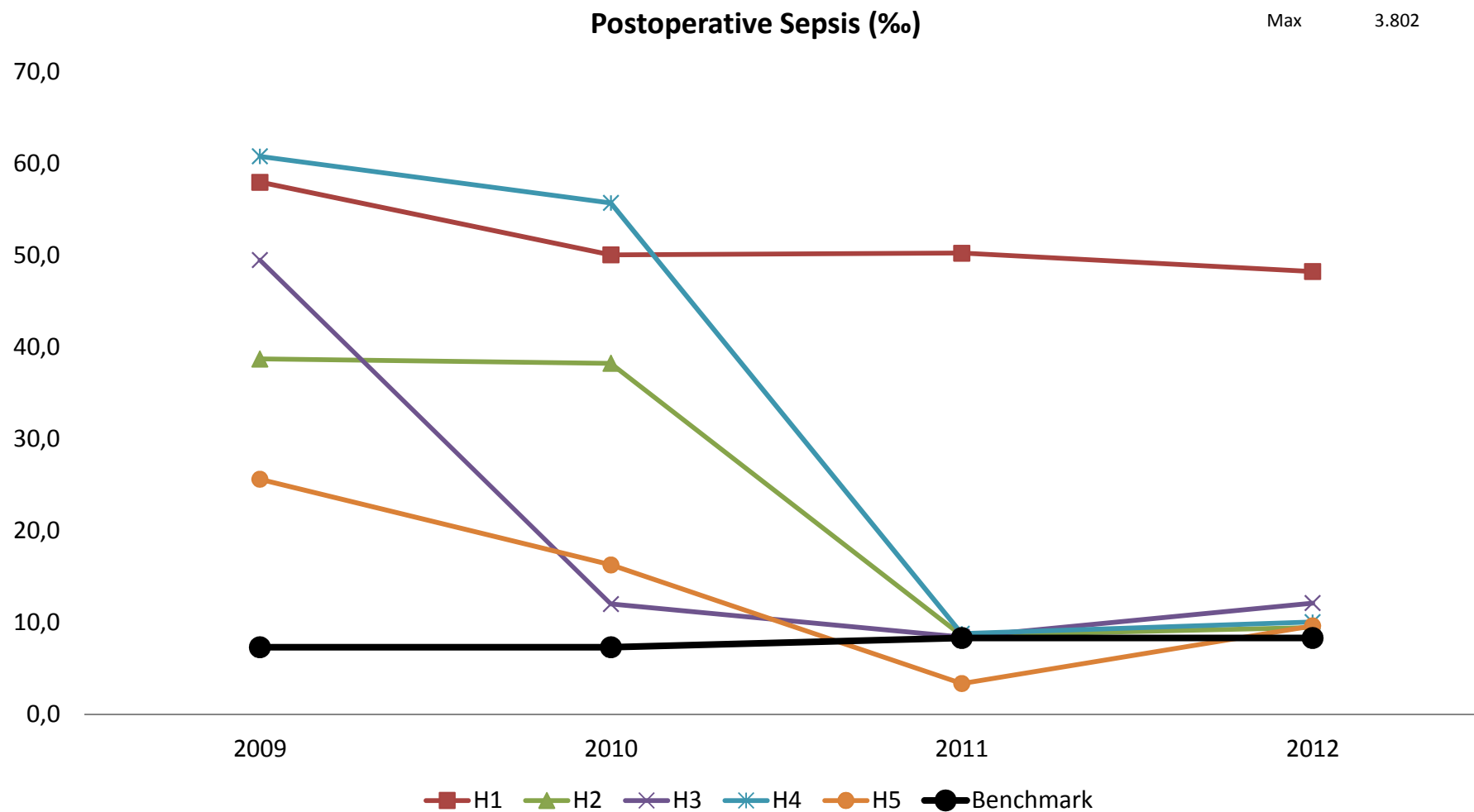


Patient Safety – Patient safety indicators (Postoperative Sepsis)

Nº of cases analyzed (2012)

Min 1.568

Max 3.802



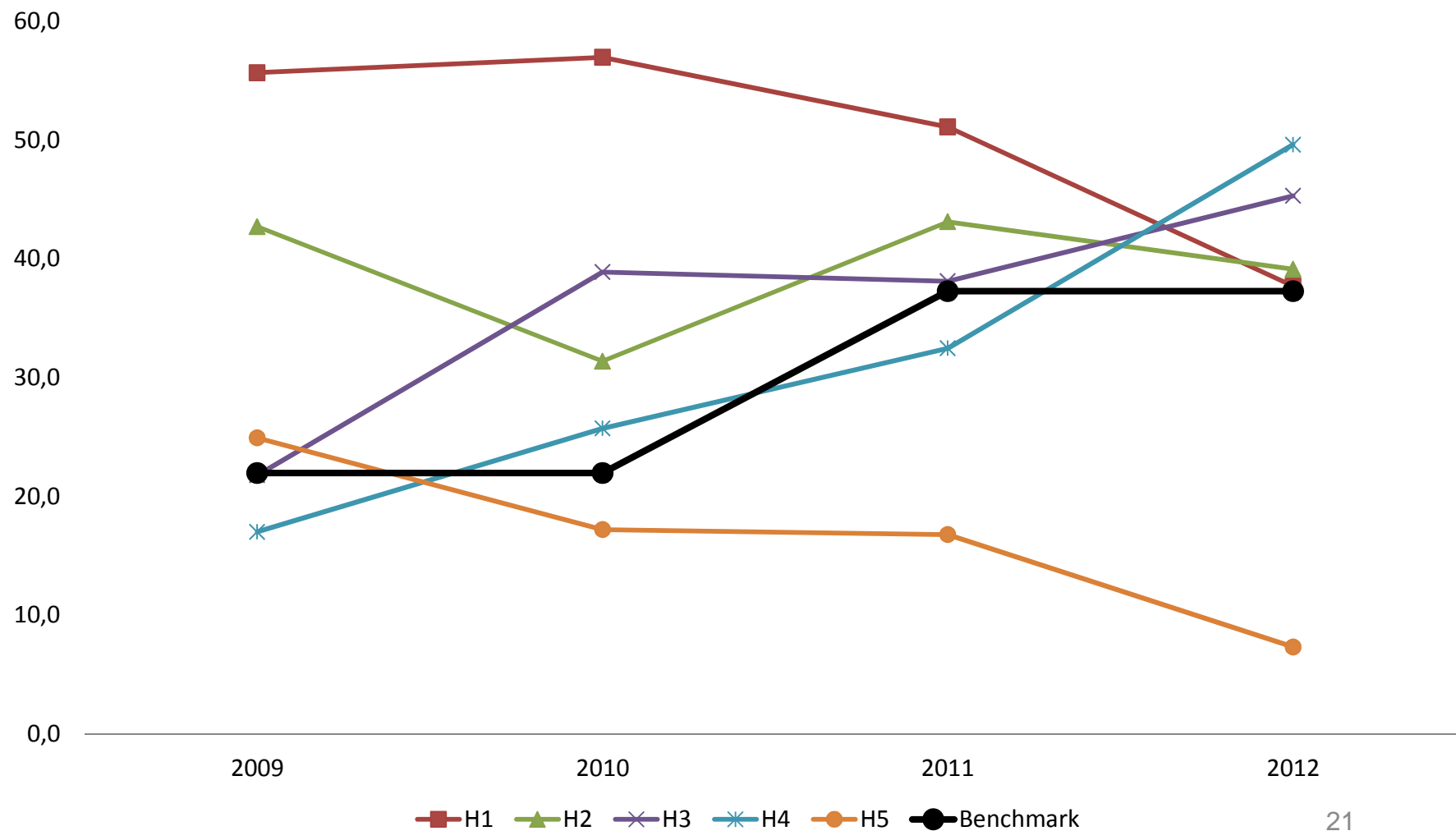
Patient Safety – Patient safety indicators (Obstetric Trauma – Vaginal with Instrument)

Nº of cases analyzed (2012)

Min 410

Max 1.047

Obstetric Trauma – Vaginal with Instrument (‰)



Patient Safety – Conclusions

❖ The **patient safety indicators** with more impact in the **Portuguese University**

Hospitals are:

- ✓ Decubitus Ulcer;
- ✓ Failure to Rescue;
- ✓ Postoperative Sepsis;
- ✓ Obstetric Trauma – Vaginal delivery with Instrument.

Patient Safety – Conclusions

- ❖ In the majority of the 5 hospitals of the sample there are **significant improvement margin** in almost all Patient Safety indicators analyzed;
- ❖ There are a **continuous improvement** in almost all hospitals for the selected indicators;
- ❖ Finally, we have to pay attention for the real clinical representation of each hospital regarding the level of **diagnostics codified/registered by discharge**.

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