



4-5 JUNE 2014

ISTANBUL, TURKEY

Haliç Congress Center

www.himssturkey.org

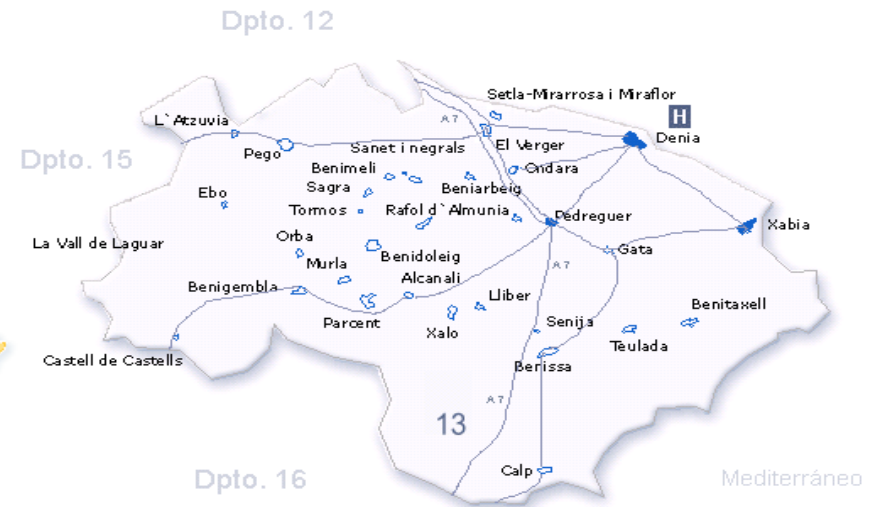
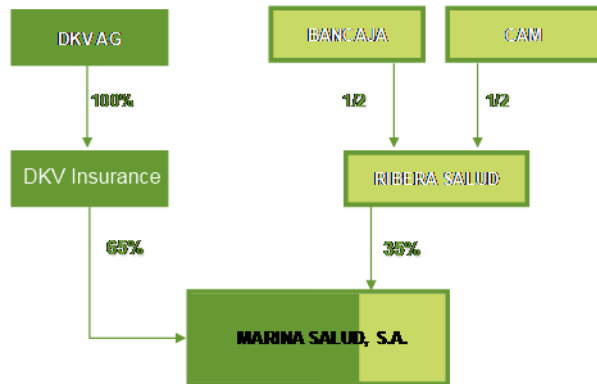
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The Real Project starts with EMRAM Stage 7

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Who are we?

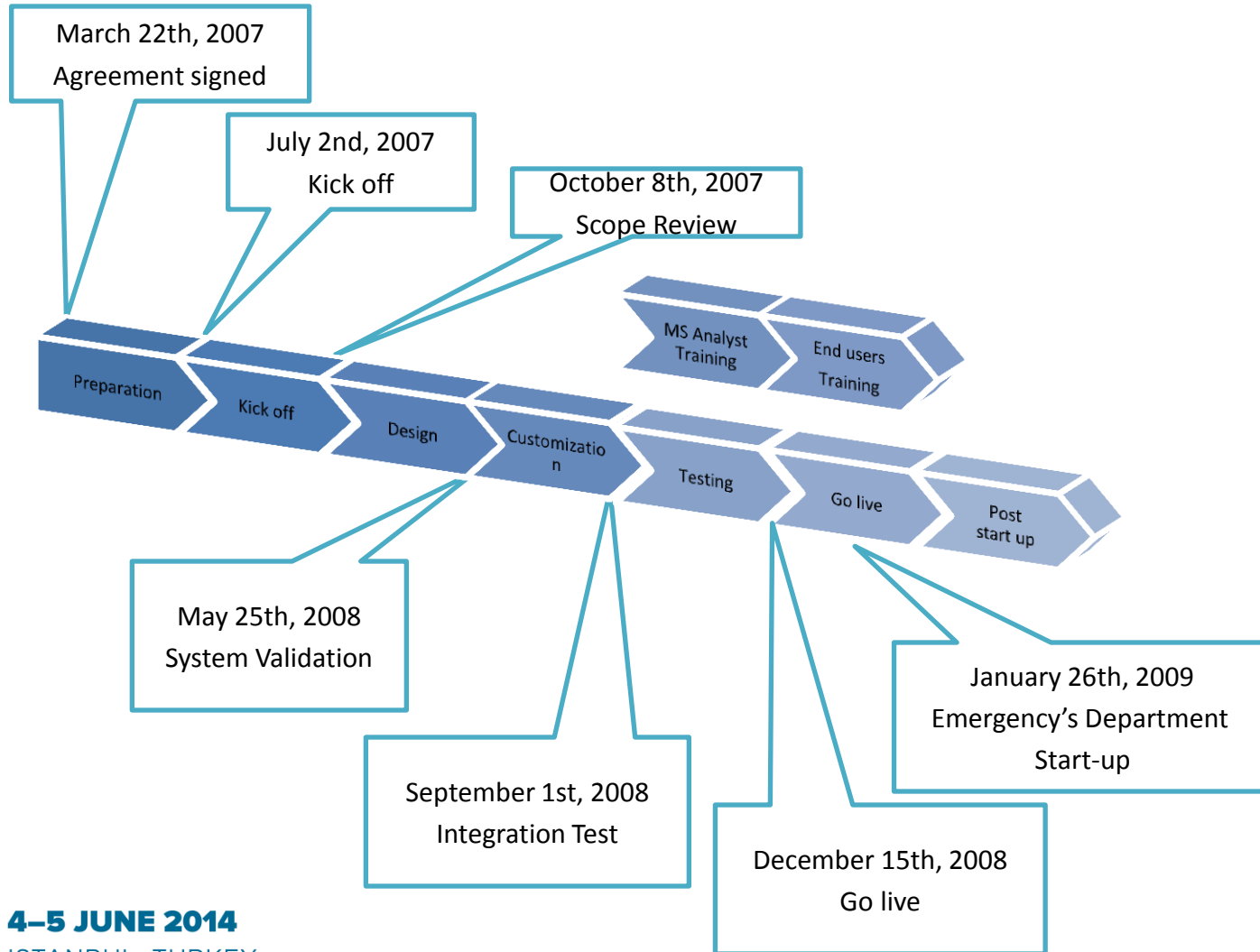


Hospital:
206 beds
7 general ORs + 4 ambulatory
Physician Staff: 200
Nursing Staff: 360
Facilitators: 40

(More than 1,200 employees)

- Reference population of more than 150,000 inhabitants (+ tourism)
- Specialized care: 1 Hospital + 2 Integrated Health Centers
- Primary Care: 11 Basic Health Zones > 34 Health Centers and Auxiliary Offices

What we did?



2011- First HIMSS recognition

EMRAM Stage 6

FOCUS AREAS

- Physician Documentation and Closed Loop Meds
- Physician Documentation with Clinical Decision Support



PHYSICIAN DOC

- Structured documentation
- Clinical pathways

CLOSED LOOP MEDS

- Close look to transversal process for both doc and meds

- Alerts
- Closing the 5 rights

FOCUS ON THE SUM OF PARTNER KNOWLEDGE+ LOCAL PROCESS TRANSVERSAL VIEW

2012- Second HIMSS recognition

EMRAM Stage 7



FOCUS AREAS

- EMR/Paperless Environment and Paperless Validation
- Data Driven Clinical Workflow and Processes
- Clinical Decision Support Capabilities (CDSC)
- Enterprise DataWareHouse (DWH)
- Downtime process

PAPERLESS VALIDATION

Exception to ideal workflow;
determine need for 100
paper scanned

CDSC

Dose range checking
Sepsis algorithm
Decrease unnecessary
preoperative chest X-ray

DWH

Government reporting:
i.e. ED triage time

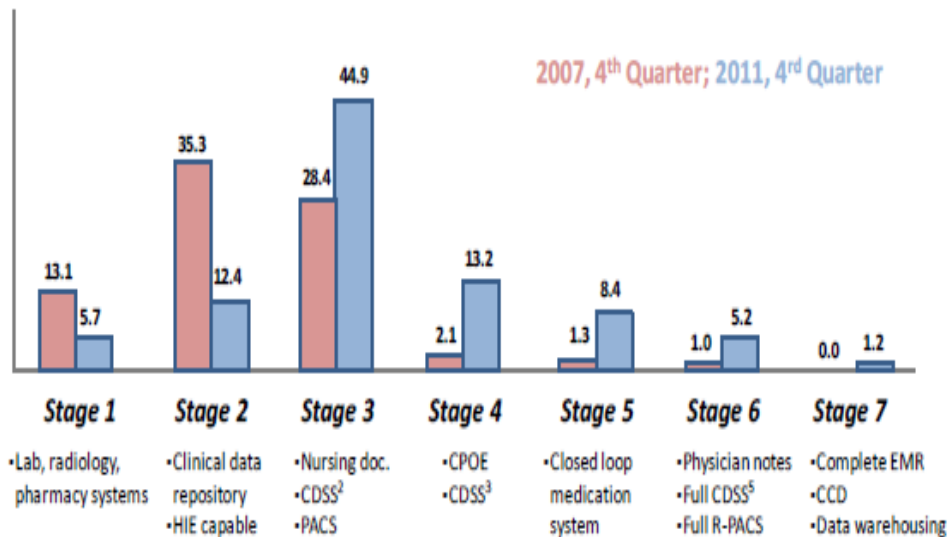
7x24 Downtime process

2012: The last good budget

	2012	2014
Total Annual Operating Expense	109.999.496€	106.359.093€
Total Depreciation	10.214.646€	8.557.471€
Total Payroll Expense	59.789.767€	56.079.746€
Total IS Operating Expense as a Percent of Total Operating Expense	2,42%	1,90%
Total IS Depreciacion	1.862.378€	1.621.616€
Total IS Salary Expense	696.750€	516.948€
Total IS Operating Expense	1.962.268€	1.506.923€

Could IT help?

Figure 1: Percentage of US Hospitals at Each EMRAM Stage



EMR BENEFITS AND BENEFIT REALIZATION METHODS OF STAGE 6 AND 7 HOSPITALS

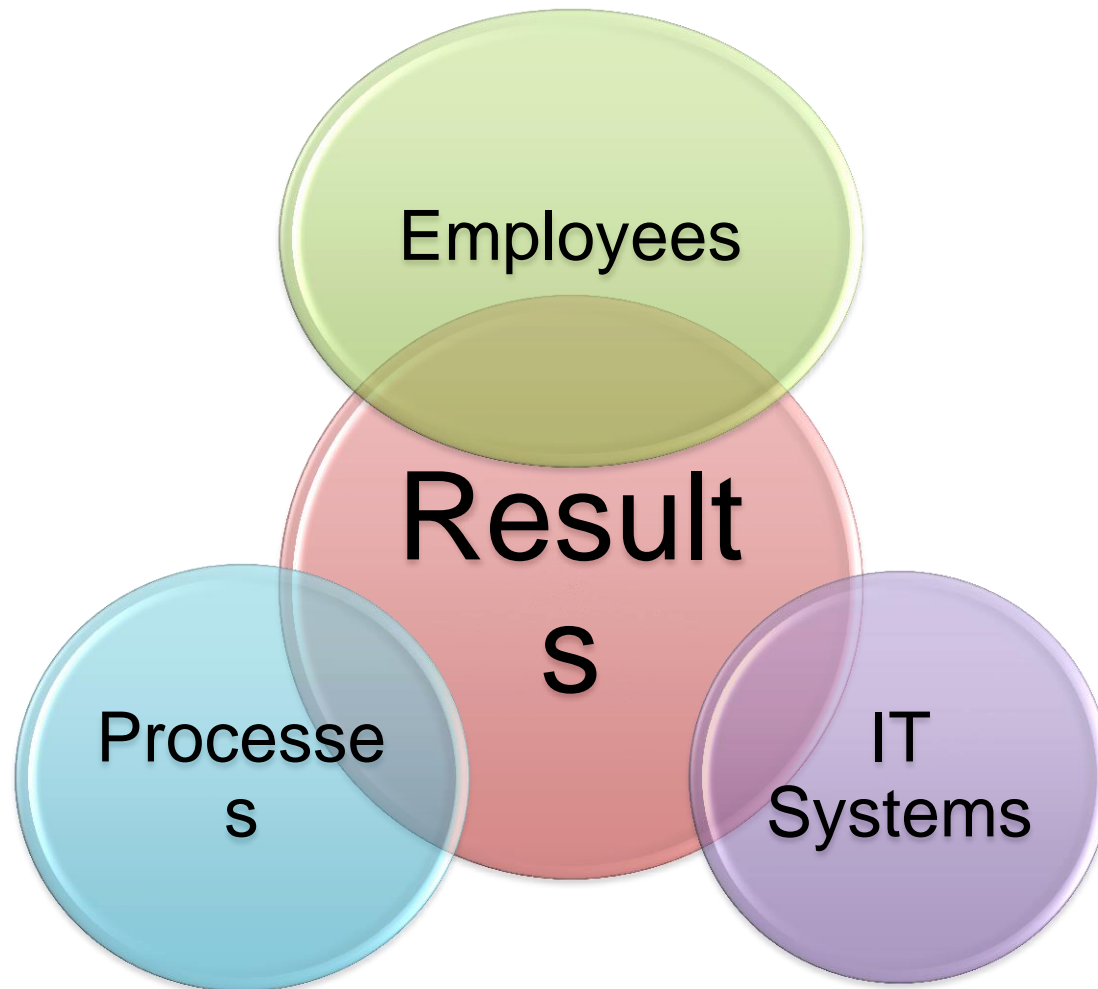
Hospitals with advanced EMRs report numerous benefits

February, 2012

The impact of the EMR is **evident** in stages 6 and 7 (and not in previous ones) in:

- **Quality** of care
- Patient **safety**
- Operational **efficiency**

What do we need?



Examples of Operational Efficiency

Nursing documentation

Benefit	Contribution	Impact	Cases	Hours/year	FTE Nurses
All discharged patients have a nursing discharge report	50% of the report's content is generated automatically	5 Minutes per report	11,728	977.33	0.56
Continuity of care between departments	Single database per patient	15 Minutes per discharge	11,728	2,932.00	1.69

Physician documentation

Benefit	Contribution	Impact	Cases	Hours /year	FTE physician
Enable remote visits	Structured clinical information available anywhere at any time. Protocols integrated.	10 Time per visit reduced from 15 to 5 minutes	5,828	971	0.56
Greater access to documentation	Single database per patient.	10 Minutes per discharge	11,728	1,955	1.13
Documentation in Operating Room	Integration of monitoring devices	7 Minutes per major surgery	8,608	1,004	0.58

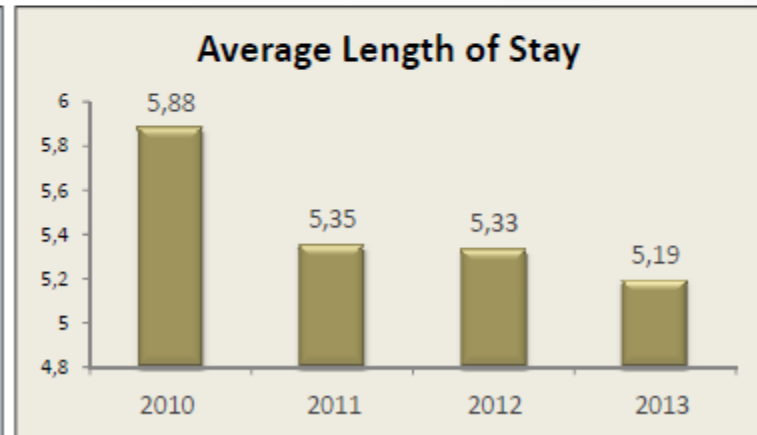
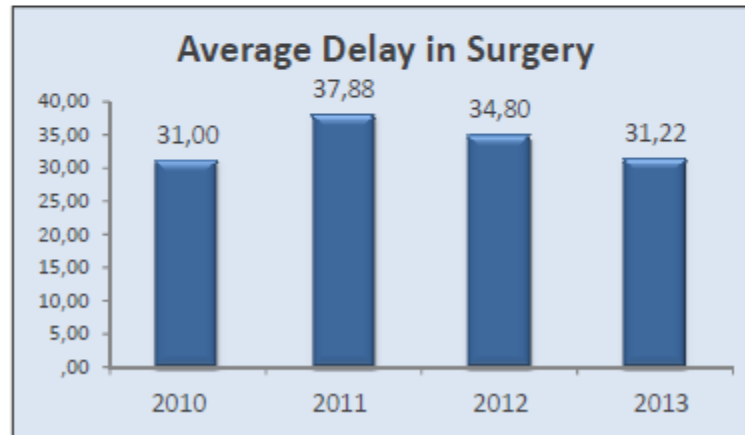
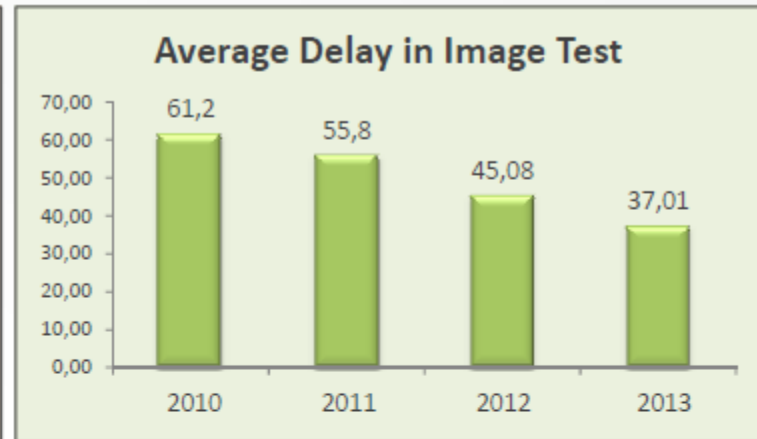
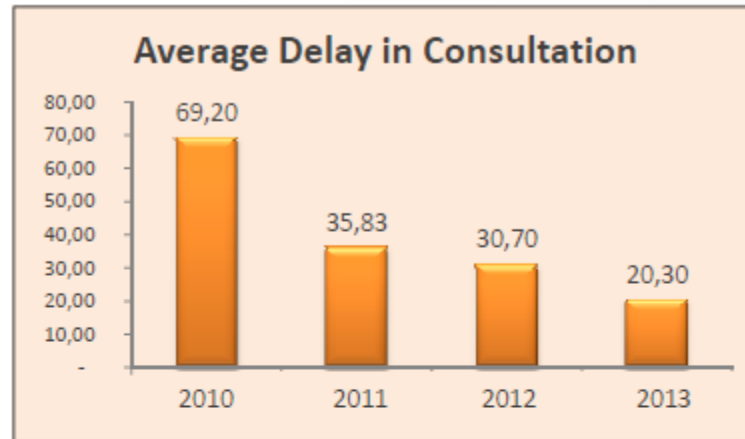
Examples of Operational Efficiency

Documentation area					
Benefit		Impact	Cases	Hours/year	FTE Staff
Availability of medical record information electronically	4	Minutes per movement (discharges, consultations, and minor surgery)	193,718	12,914.53	7.47
Improved coding	5	Minutes per major and minor surgery	14,994	1,249.50	0.72
Automatic distribution of discharge report	5	Minutes per report	6,824	568.67	0.33

Preference cards in OR			
ACTIVITY	2011	2012	2013
TOTAL Surgical Procedures	11,874	11,727	12,414
Scheduled Procedures	10,453	10,173	10,897
TOTAL Increase 2013-11			540
% TOTAL INCREASE related to 2011		%-1,25	%5.53
BUDGET	2011	2012	2013
TOTAL Expenses Medical Supplies	\$ 12,297,370	\$ 10,719,001	\$ 9,466,640
Expenses in Surgical Area	\$ 4,304,079	\$ 3,751,650	\$ 3,313,238
TOTAL Savings 2013-11			-\$ 990,841
% SAVINGS IN SURGICAL AREA related to 2011			%29

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Examples of Operational Efficiency

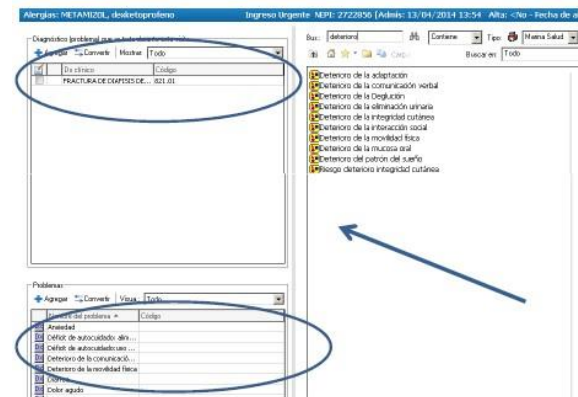


Source: marinaSalud Managing Control

Examples of Quality of Care

Full nursing process

- 100% of patients with nursing care plans
- 100% of patients with nursing care report
- 5 rights in the close loop medication process
- Full paperless nursing care process: assessment, diagnosis, care planning and evaluation of results.



Examples of Quality of Care

Pressure ulcers (PU)

- 99.42% of hospitalized patients had Norton risk scale for pressure ulcer assessment.
- In 1,561 patients, 72 PU prevalence of 4.61%.
- Only 28 PU are hospital waste prevalence of 1.79%.

Falls

- 72,832 stays were recorded.
- Conley risk rating scale to 1,555 patients.
- 126 falls were recorded.
- Incidence rate of 1.73 x 1000.

The patient was:

- 44% wandering.
- 32% lying.
- 11% sitting.

Phlebitis

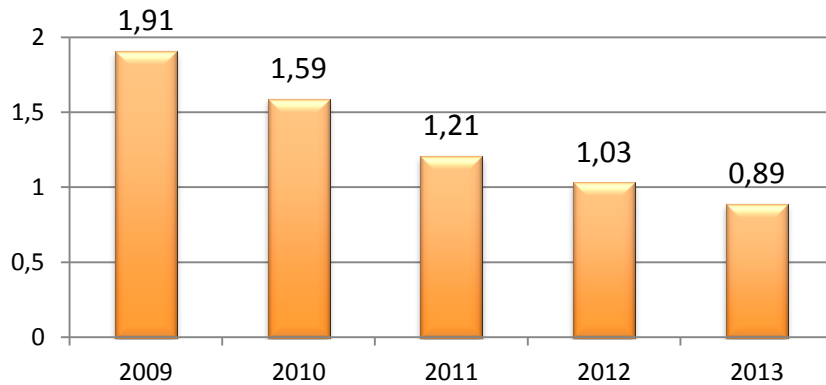
- 128 patients analyzed.
- Selected dressing:
 - Transparent 59,63%
 - Bandages or mesh 37.61%.
 - Opaque 2%

Degree of phlebitis:

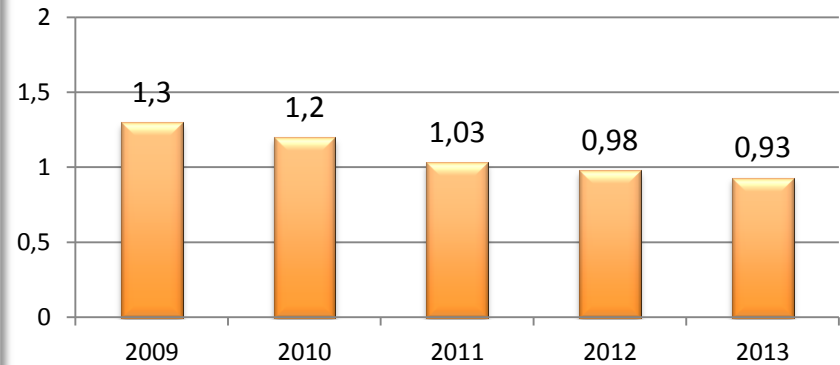
- No presence 86, 24%.
- Signs 10.09%.
- Phlebitis 3.67%

Examples of Quality of Care

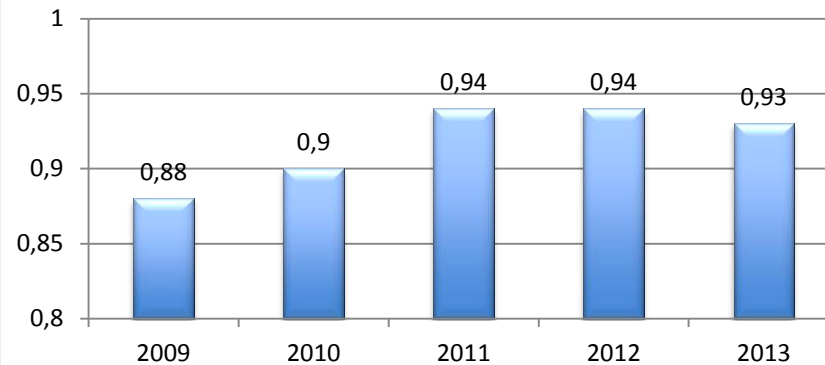
IEM pre-op



IEMAR

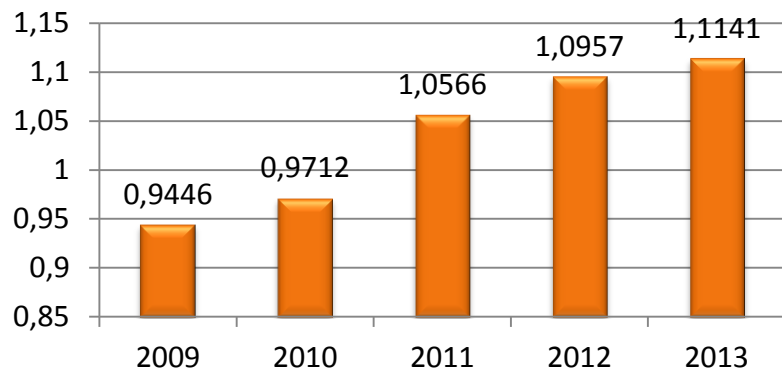


ICSIA

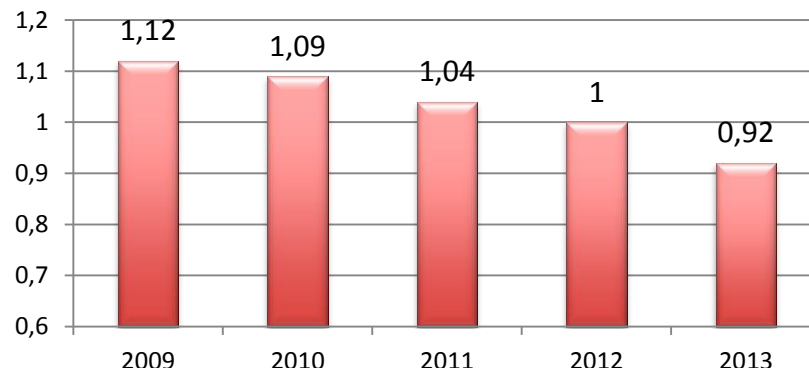


Examples of Quality of Care

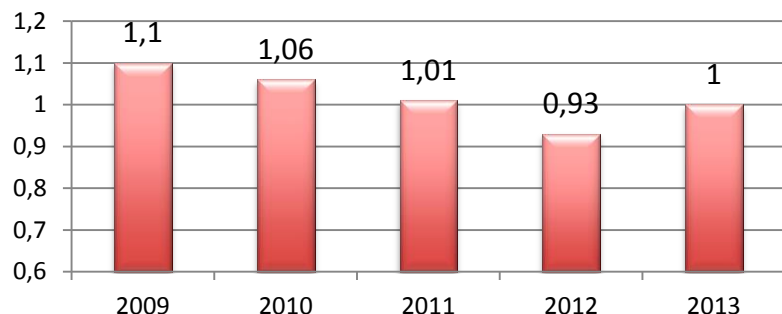
Complexity. Relative weight.



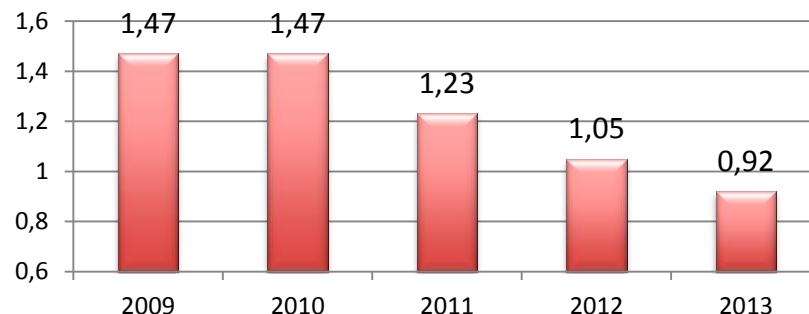
ICAR (complications)



IRAR (readmissions)

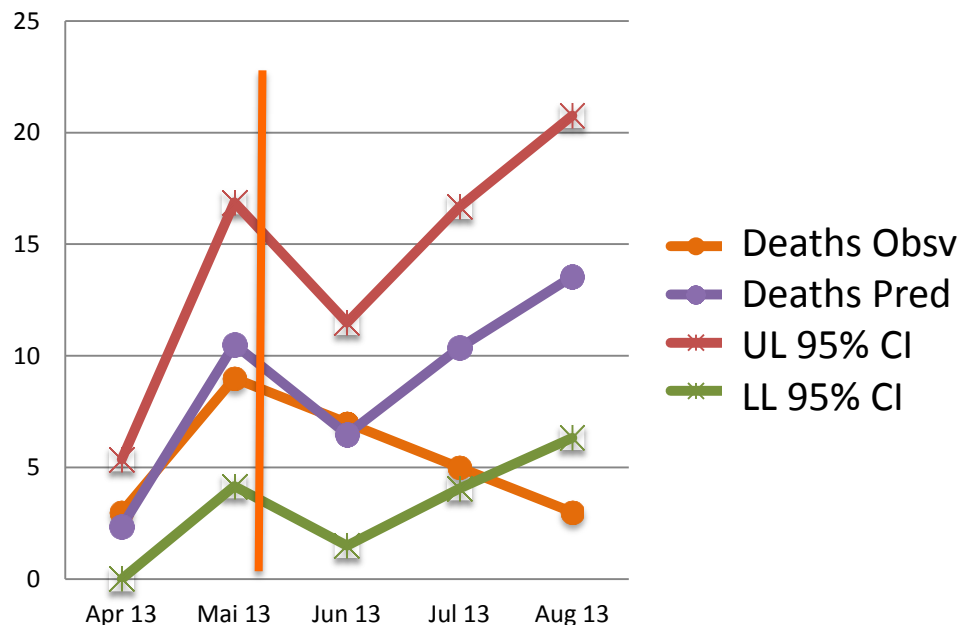


IMAR (mortality)

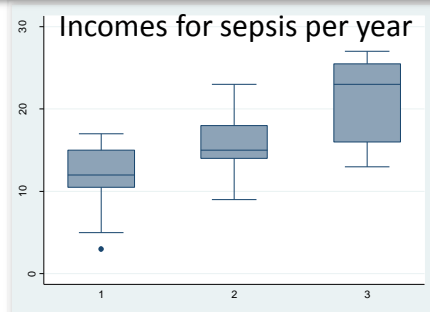
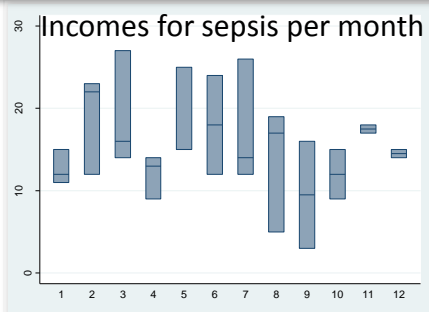
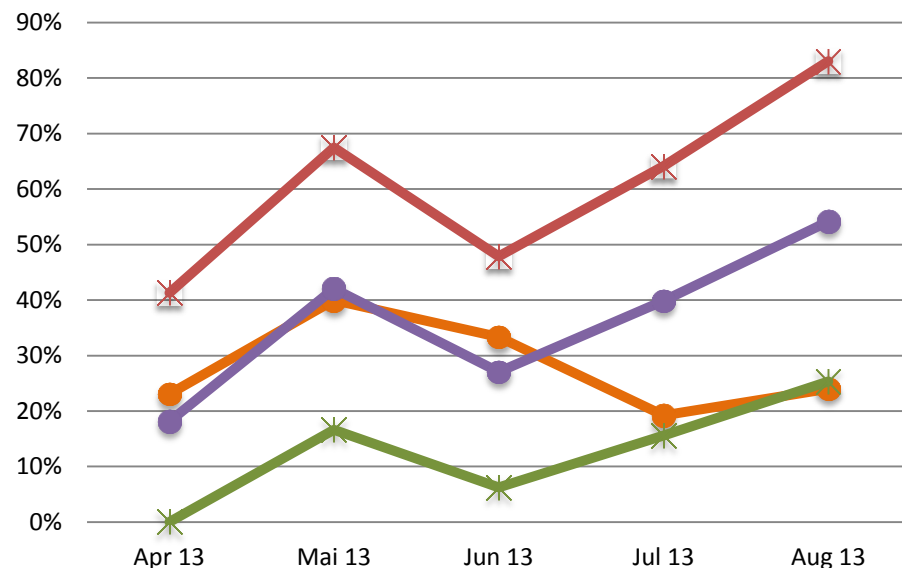


Examples of Patient Safety

Absolute Deaths Observed & Predicted



% SEPSIS Deaths Observed & Predicted



In four months **32%** reduction of deaths observed front predicted

Examples of Patient Safety

Pre-operative chest x-ray rule

- In pre-operative test plan, chest x-ray rule is canceled if patients is <60 years
- 988 x-ray avoided first year

Alerts in case of allergies on medication

- The prescription proces alerts the doctor for allergies to medication
- 1292 alerts in allergies and doctors cancelled 392 prescriptions (30,34%)

Early diagnosis of cervical cancer

- Automatic alert in case of alarming result, reducing gynecologist visit time and sending letters to the patients in case of normal results (without intervention of staff)
- Reduced 30% process time

Intensive immunization in HIV patients

Vaccination influenza, hepatitis, pneumococcal reaching 99% in the target population.

- 90% reduction in readmission for respiratory and during the first 6 months, no cases of infection by hepatitis and pneumococcal income in the target population were detected.

Organised by:

Conclusions

IT is not enough

Innovation in processes is essential

Without people is not possible

Thank You!

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