



eHealth
week

11 - 13 MAY 2015
RIGA, LATVIA

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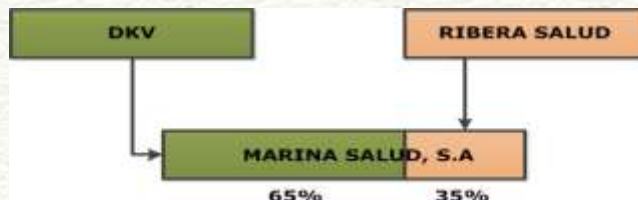


HIMSS STAGE 7 IS THE FIRST STEP

Vicent Moncho Mas

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Who are we?



1 Hospital
4 Integrated Health Centers (Specialized care)
34 Primary Care Centers (11 Basic areas)



Our roadmap...



What is Stage 7?

European EMR Adoption Model™	
Stage	Cumulative Capabilities
Stage 7	Complete EMR; CCD transactions to share data; Data warehousing feeding outcomes reports, quality assurance, and business intelligence; Data continuity with ED, ambulatory, OP.
Stage 6	Physician documentation; interaction with full CDSS (structured templates related to clinical protocols trigger variance & compliance alerts) and Closed loop medication administration.
Stage 5	Full complement of PACS displaces all film-based images.
Stage 4	CPOE in at least one clinical service area and/or for medication (i.e. e-Prescribing); may have Clinical Decision Support based on clinical protocols.
Stage 3	Nursing/clinical documentation (flow sheets); may have Clinical Decision Support for error checking during order entry and/or PACS available outside Radiology.
Stage 2	Clinical Data Repository (CDR) / Electronic Patient Record; may have Controlled Medical Vocabulary; Clinical Decision Support (CDS) for rudimentary conflict checking; Document Imaging and health information exchange (HIE) capability.
Stage 1	Ancillaries – Lab, Radiology, Pharmacy – All installed OR processing LIS, RIS, PHES data output online from external service providers.
Stage 0	All three Ancillaries (LIS, RIS, PHES) Not installed OR Not processing Lab, Radiology, Pharmacy data output online from external service providers.

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Stage 2

- CDSS for rudimentary conflict checking

Stage 3

- CDSS for error checking during order entry

Stage 4

- CDSS based on clinical protocols

Stage 6

- Full CDSS (structured templates related to clinical protocols trigger variance & compliance alerts)
- Closed loop medication administration

Stage 7

- DW feeding outcomes reports
- Business intelligence

DSS is not new...

In the 80's, Decision Support System (DSS) was described as computer decision making system that:

1. supports decision makers rather than replaces them
2. utilizes data and models
3. solves problems with varying degrees of structure:
 - (a) non-structured (unstructured or ill-structured) (Bonczek et al. 1981)
 - (b) semi-structured (Keen and Scott-Morton 1978)
 - (c) semi-structured and unstructured (Sprague and Carlson 1982);



And it focuses on effectiveness rather than efficiency in decision processes (facilitating decision processes).

(Alter 1980; Bonczek et al. 1981; Keen and ScottMorton 1978; Sprague and Carlson 1982)

Business Intelligence is a set of...

The term BI was first used by Gartner and popularized by analyst Howard Dresner: “it describes the process of turning data into information and then into knowledge”

BI can be seen as an umbrella that covers a whole range of concepts: it can be approached roughly as being a Data Warehouse, with three layers on top of it:

- Queries & Reports
- OnLine Analytical Processing
- Data Mining



Decisions, better decisions...

BI	CDSS
Business Intelligence is a broad category of applications and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions	A decision support system is a computer algorithm that analyzes clinical data and shows to the users some conclusions for making decisions more easily

Both technologies are for helping to make better decisions



How is your project?

- How many CDS algorithms have your organization implemented?
- Are the users satisfied with them?
- What are the clinical results? In terms of quality? Financial?
- How many invest your organization implementing them?
- What kind of decisions are taken thanks the BI dashboards or reports?
- Have your organization financial and clinical information on the BI system?



BI and CDSS need investment in knowledge

These technologies need an continuous investment in creating, modifying and analyzing the algorithms.

These technologies don't give the answer, only helps for taking it.

These technologies are a waste of money if we believe that having them we finish.



THANK YOU

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