

Presented by:



ciosummit
HIMSS Europe

7-8 October 2015
Valencia, Spain

A CASE STUDY BY ANADOLU MEDICAL CENTER-TURKEY

Burak Uzkan – IT Director

 @ anadulusaglik

 #ciosummit2015 @himsseurope

www.hitciosummit.eu



ANADOLU^H

In Affiliation with
JOHNS HOPKINS MEDICINE



**Anadolu Group
&
Foundation**



**Anadolu
Medical
Center**



**Top Medical
Specialties**



**International
Services**

- Founded in 1979
- More than 50 projects completed including 3 hospitals, faculties, schools, dorms, sports and social facilities
- Scholarships to more than 20.000 students
- Social Responsibility Projects
- Anadolu Group companies donate 1-5% of their earnings to the foundation every year.





AMC Hospital



AMC Outpatient Clinic



Affiliation with JHI

- Licensing agreement
 - *Grant of license to use the name*
 - *Exclusivity*
 - *Board representation*
 - *Medical directorship*
- Educational, consulting and patient services agreement
 - *Training opportunities for administrators*
 - *Administrative coordination*
 - *Clinical program evaluation*
 - *Architectural and engineering design input*
 - *Human resources consulting*
 - *Medical equipment/technology evaluation*



- *Health information technology*
- *Performance improvement, audits*
- *Joint conferences*
- *Medical second opinion*
- *Telemedicine*
- *Patient referrals*





- Located on 42 acres (180,000 m2) piece of land
- 49,000 m2 closed area
- 10 minutes to Sabiha Gökçen Airport and 45 minutes to Atatürk Airport
- Peaceful environment with all inpatient rooms having sea view
- A general acute care hospital
- Fully equipped in world standards



- 136 Doctors
- 384 Nurses
- 209 Bed Capacity
- 59 ICU Beds
- 8 Operating Rooms
- 1074 Employees in total



Top Medical Specialties

- Oncology
 - Medical Oncology
 - Bone Marrow Transplantation
 - Radiation Oncology
 - PET CT
 - Pain Management
- Cardiac Care
- Cardiac Surgery
- Neurosurgery
- Orthopedic Oncology
- Reconstructive Microsurgery
- General Surgery
- Infertility/IVF





Accreditations



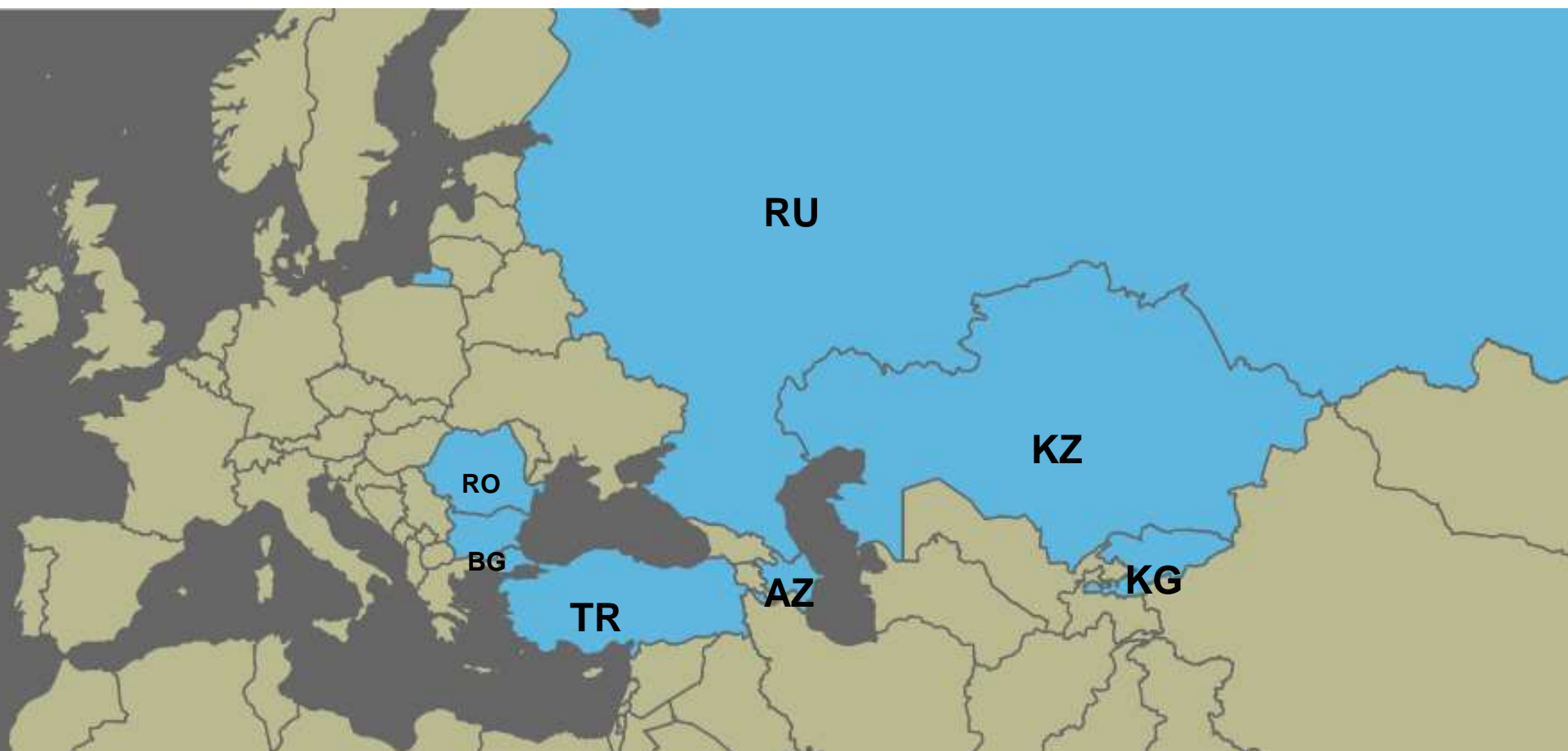
Joint Commission®
INTERNATIONAL



European Society for Medical Oncology



AMC Representative Offices / 14 Offices in 6 Countries



Anadolu's IT Strategy Background in 2005

Business Drivers

- Highest Quality of Care
- Patient Safety
- Patient Satisfaction
- Cost Challenges
- Employee Satisfaction
- Medical Tourism opportunities
- Accreditation (JCI, ISO, etc)
- John Hopkins Affiliation

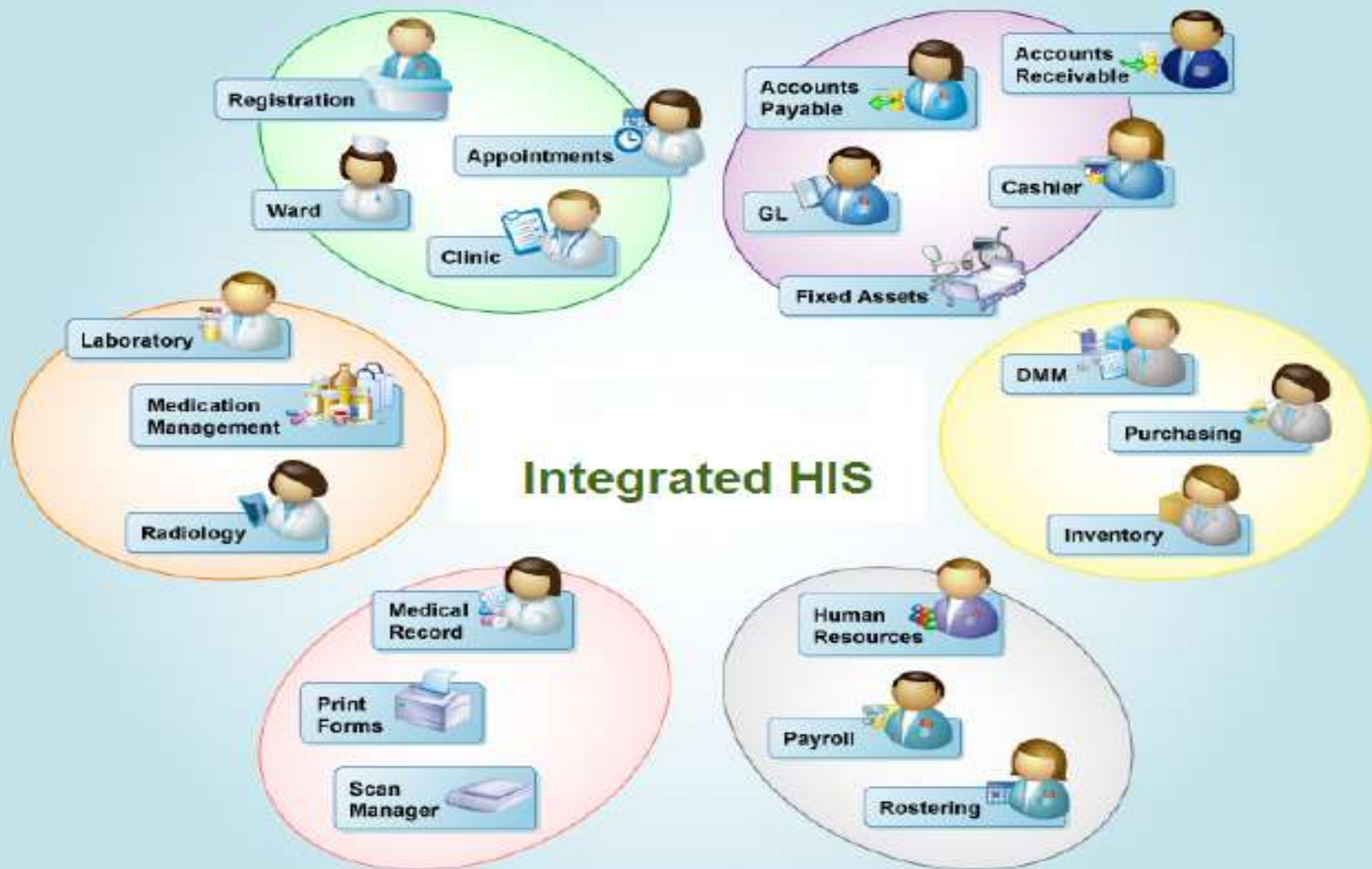
Business Solutions

- Fully Integrated HIS
- RIS/PACS
- NMIS
- BMTIS
- Dispensing System
 - Drug
 - Materials
- ERP System
- CRM

Technologies

- Medical-Grade Network
 - LAN
 - WAN
 - Wireless environment
- High Available computing platform
 - Storage Solutions
 - Archiving
- Layered Security
- Service Oriented Architecture
- Web – Based technology
- BPM / Workflow management platform



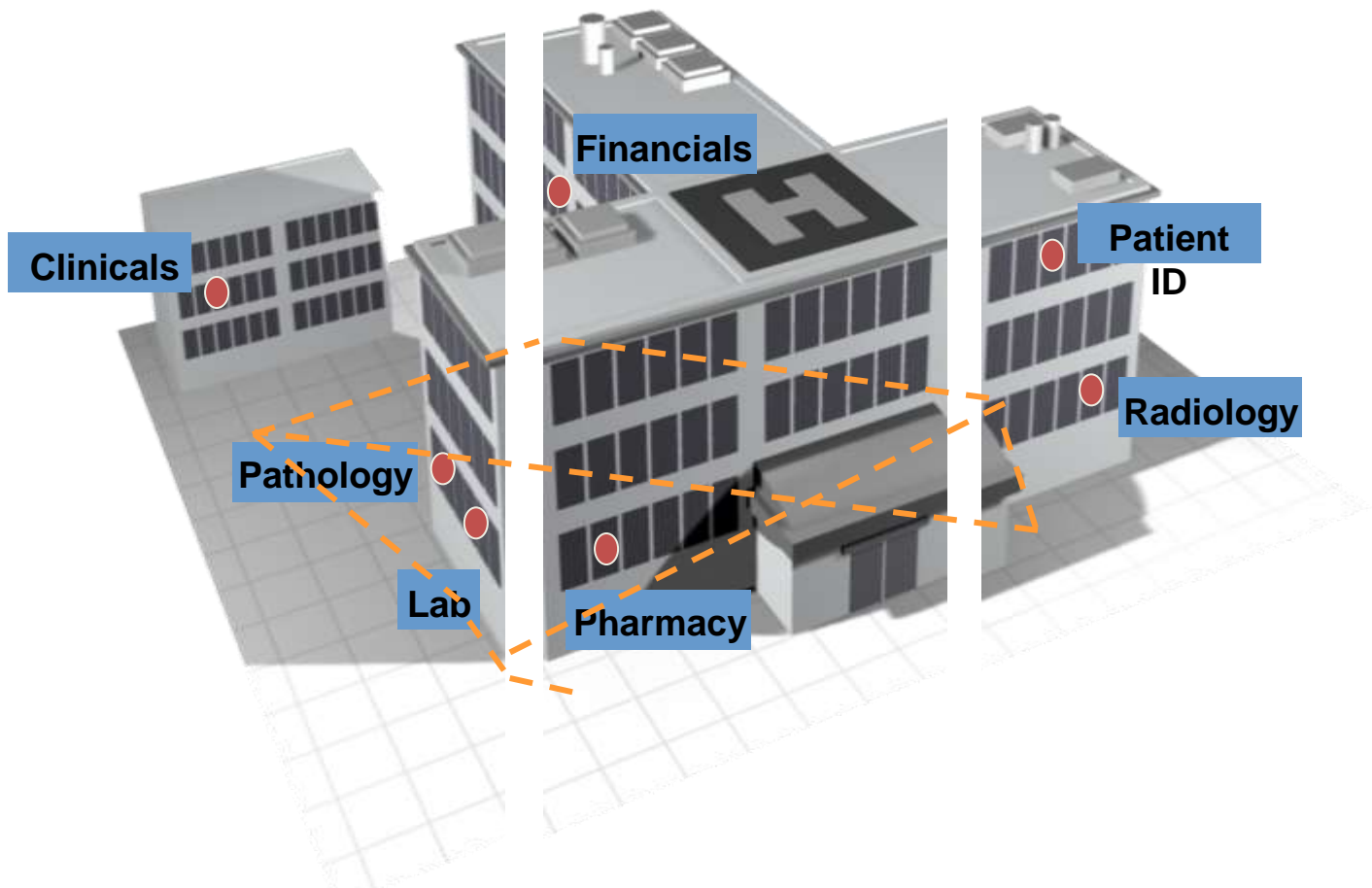




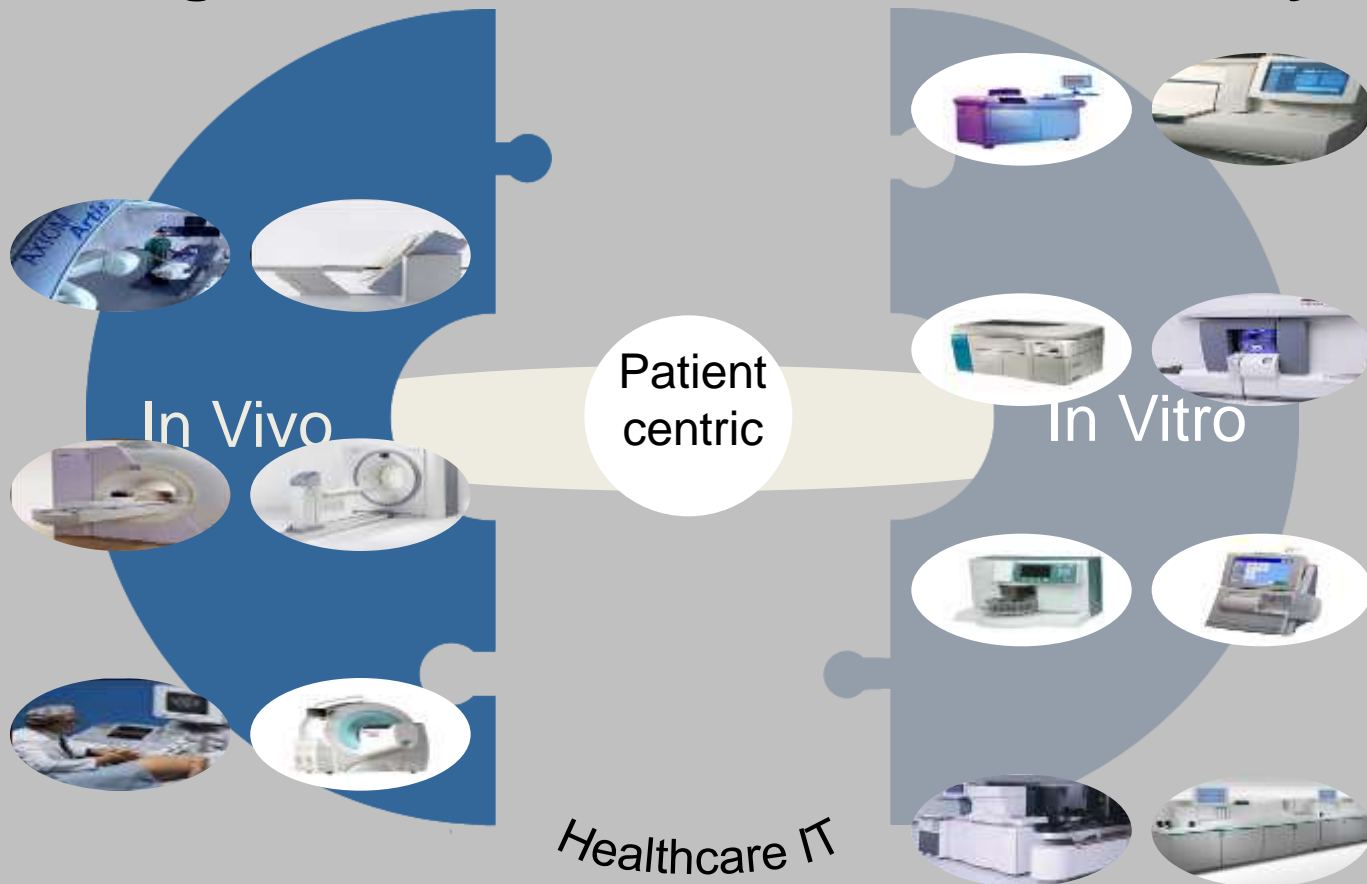
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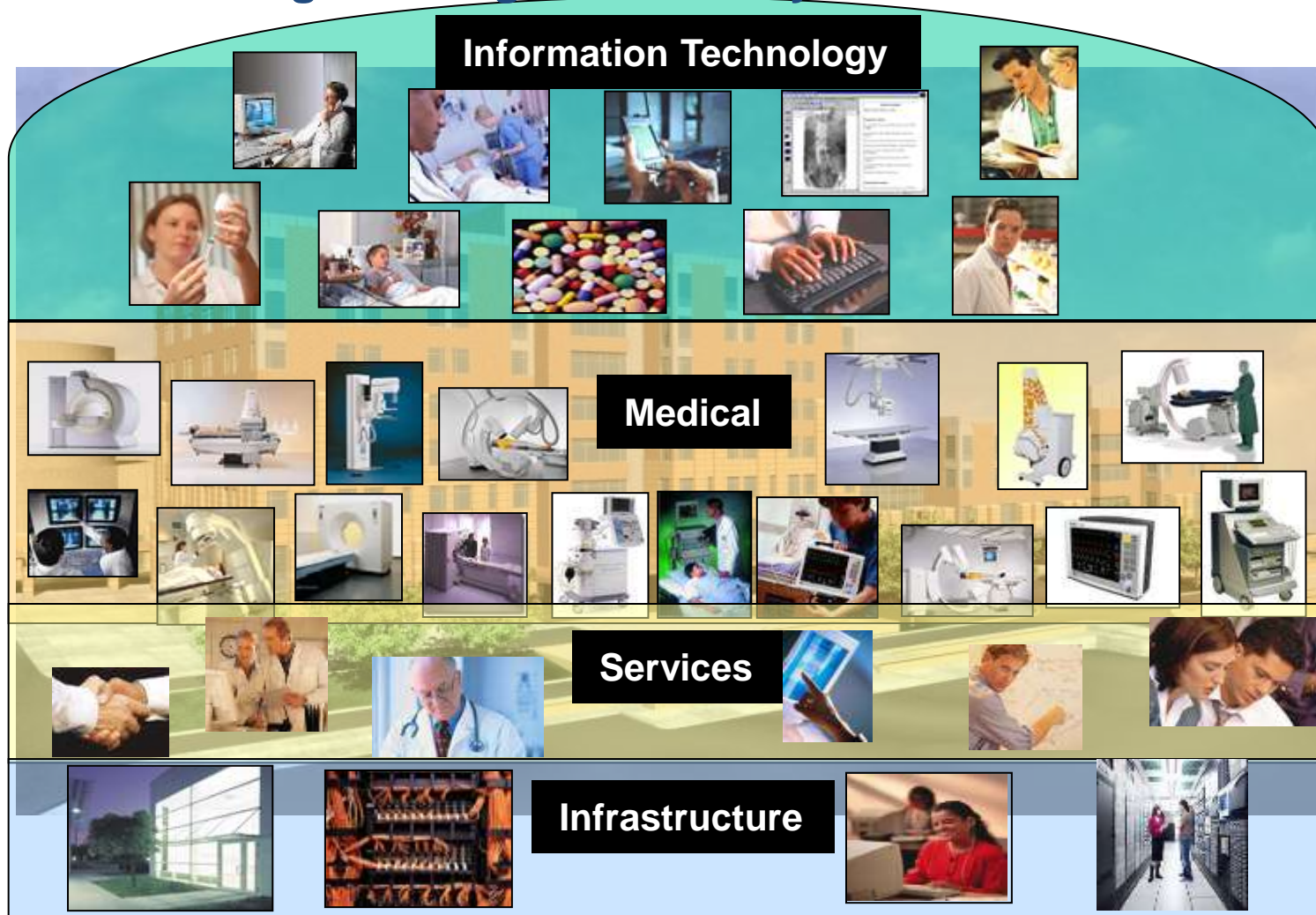
Seamless Interoperability Between Functional Areas



Integrated IT for enhanced care delivery



Integrated Digital Health System Solution



Software usage and IT supported processes		Stage Relevance
What percent of all current medical records are electronic (incl. digital/scanned data)?	76-100%	
Physician Documentation		
What percent of physicians use the Physician Documentation system?	76-100%	
What percent of Physician Documentation generates discrete (computer-readable) data?	76-100%	
Electronic Ordering		
Electronic ordering for nursing and/or physician services	Yes	
What % of all inpatient non-medication orders are processed electronically?	76-100%	
Electronic ordering for medication	Yes	
What % of all inpatient medication orders are processed electronically?	76-100%	
Clinical Decision Support (for...)		
Clinical Documentation (Physician / Nursing Documentation)	No	Stage 6
Medication Orders	Yes	
Non-Medication Orders	Yes	
Image Management System (IMS)		
Is your solution integrated with your Electronic Medical Record (EMR)?	Yes	
Does your image management solution support Non-DICOM standards?	Yes	
What % of medical images in Radiology are managed by your IMS?	100 % (all)	
What % of medical images in all other departments are managed by your IMS?	26-50%	
Closed Loop Medication		
2nd line of validation for critical medication prescriptions which is documented	Yes	
Automated Dispensing of medication is available	Yes	
Which of the following is auto-identified during bedside medication administration?		
Patient	No	Stage 6
Nurse	No	
Medication (unit dose or 1 day multi-dose sachet)	No	Stage 6
Electronic Medication Administration Record (EMAR) available at point of care / bedside?	No	Stage 6
Closed-loop medication administration at the point of care	No	Stage 6



Software Applications

	Current Status	Purchase or Installation planned (within 3 years)?
Patient Administration System (PAS)	Live and Operational	Yes - Purchase/Roll-out of new application
Enterprise Resource Planning (ERP)	Live and Operational	No
Business Intelligence	Live and Operational	No
Clinical Data Warehousing	Live and Operational	No
Quality Management	Live and Operational	Yes - Purchase/Roll-out of new application
Intensive Care Management System	Not Available / Not Operational	Yes - Purchase/Roll-out of new application
Radiology Information System	Live and Operational	No
Cardiology Information System	Live and Operational	No
Oncology Management Software	Not Available / Not Operational	Yes - Purchase/Roll-out of new application
Laboratory Information System	Live and Operational	Yes - Purchase/Roll-out of new application
Pharmacy Management System	Live and Operational	Yes - Purchase/Roll-out of new application
Electronic Medication Administration Record (eMAR)	Live and Operational	Yes - Purchase/Roll-out of new application
Electronic Patient Record / Clinical Data Repository	Live and Operational	Yes - Purchase/Roll-out of new application
Nursing Documentation	Live and Operational	Yes - Purchase/Roll-out of new application
Physician Documentation	Live and Operational	Yes - Purchase/Roll-out of new application
Chronic Disease Management System (CDMS)	Not Available / Not Operational	Yes - Purchase/Roll-out of new application
Dictation with Speech Recognition	Not Available / Not Operational	Yes - Purchase/Roll-out of new application

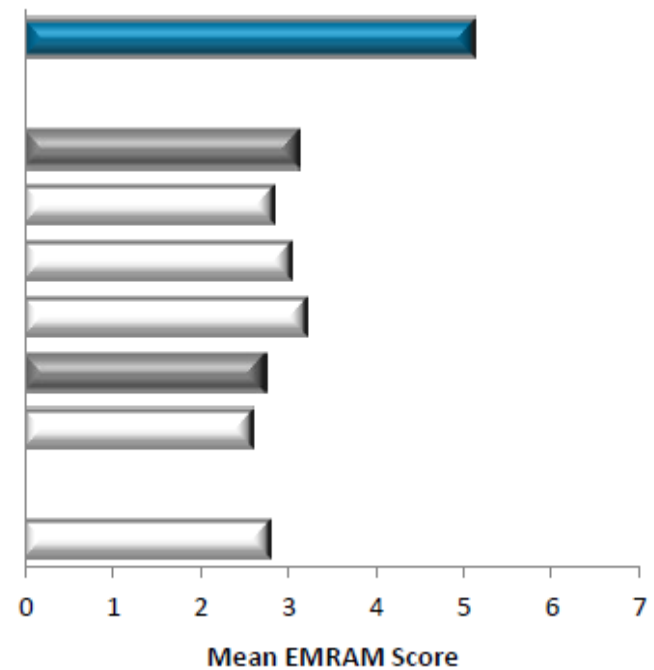


Level of Integration

	<u>Level of Integration with EMR / clinical HIS</u>	<u>Scope of Deployment (for inpatient care)</u>	<u>Contract Year (respectively last Major Upgrade)</u>
Business Intelligence	Stand-alone - integrated ▼	Hospital/enterprise-wide ▼	2014 ▼
Clinical Data Warehousing	Stand-alone - integrated ▼	Hospital/enterprise-wide ▼	2014 ▼
Quality Management	EMR- / HIS-module (part of suite) ▼	Department/area-specific ▼	2009 ▼
Laboratory Information System	EMR- / HIS-module (part of suite) ▼	Hospital/enterprise-wide ▼	2009 ▼
Pharmacy Management System	EMR- / HIS-module (part of suite) ▼	Hospital/enterprise-wide ▼	2009 ▼
Radiology Information System	Stand-alone - integrated ▼	Hospital/enterprise-wide ▼	2013 ▼
Cardiology Information System	Stand-alone - integrated ▼	Hospital/enterprise-wide ▼	2015 ▼
Electronic Patient Record / Clinical Data Repository	EMR- / HIS-module (part of suite) ▼	Hospital/enterprise-wide ▼	2009 ▼
Nursing Documentation	EMR- / HIS-module (part of suite) ▼	Hospital/enterprise-wide ▼	2009 ▼
Physician Documentation	EMR- / HIS-module (part of suite) ▼	Hospital/enterprise-wide ▼	2009 ▼
Electronic Medication Administration Record (eMAR)	EMR- / HIS-module (part of suite) ▼	Hospital/enterprise-wide ▼	2009 ▼
Patient Administration System (PAS)	EMR- / HIS-module (part of suite) ▼	Hospital/enterprise-wide ▼	2009 ▼
Enterprise Resource Planning (ERP)	Stand-alone - integrated ▼	Hospital/enterprise-wide ▼	2011 ▼



Your EMRAM Score:		5.1000	
EMRAM scores for your comparison		Mean	Count
Europe*		3.1	1,066
Hospitals < 500 beds		2.8	811
Private not for Profit		3.0	138
General Medical hospitals		3.2	908
Turkey		2.7	324
Hospitals < 500 beds		2.6	263
Private not for Profit		0.0	0
General Medical hospitals		2.8	262



* Countries included are (descending order by N): Turkey, Spain, Germany, Italy, United Kingdom, Netherlands, Austria, Portugal, Denmark, France, Belgium, Switzerland, Poland, Norway, Slovenia, Finland, Greece, Iceland, Ireland

* Source: HIMSS Europe Database, Q2/2015 (data from 7/2013 – 06/2015)



Cerner To Buy Siemens Health IT Business for \$1.3 Billion

Healthcare Business News



Cerner: Siemens health IT unit positions company for move beyond EHRs

By [John N. Frank](#) and [Darius Tahir](#)

Posted: August 5, 2014 - 4:30 pm ET

Tags: [Acquisitions](#), [Cerner Corp.](#), [Deals](#), [Electronic Health Records \(EHR\)](#), [Executives](#), [Information Technology](#), [Revenue](#)

(Story updated at 7:45 p.m. ET.)

Health technology and [electronic health records](#) powerhouse [Cerner Corp.](#) is spending \$1.3 billion to purchase Siemens Health Services, the health information technology business of Germany's Siemens AG, Cerner announced Tuesday.



Patterson

The newly combined company will have \$4.5 billion in annual revenue and will invest \$650 million annually in research and development, Kansas City, Mo.-based Cerner said. Its client base will include 18,000 facilities in the U.S. and Germany.

"We believe this is an all-win situation for the clients of both organizations and all of our associates and shareholders," said Neal Patterson, Cerner's CEO and co-founder.

Advertisement | [View Media Kit](#)



The deal also calls for Cerner and Siemens to form a strategic alliance to "bring new solutions to market that combine Cerner's health IT leadership and Siemens' strengths in medical devices and imaging," the [Cerner announcement said](#).



Vendor Evaluation Criteria Categories

Category	Vendor Status
Vision	Vendor's vision for the healthcare Industry and for their market(s); their plans to address the evolving needs of the market(s) (e.g. strategy)
Viability	Ability to implement and execute their strategy to address the evolving needs of their market(s)
Technical Architecture	Application and integration architecture plus the technologies, tools and standards supporting the architecture
Functionality	Range and scope of product line offerings, functionality and usability
Costs	Total cost of ownership – acquisition, implementation, maintenance and added staff
Service Levels	Implementation approach and success, user vendor ratings, support and maintenance

Expected Outcomes

Improving Quality of Care

- Reduction in cardiac Mortality within 90 days of heart attack
- Reduction in hospital readmissions
- Increase in Stage 0 breast tumour recognition
- Reduction in hospitalisations for diabetic patients

Enhancing Clinical Safety

- Reduction in MRSA infections
- Reduction in medication errors per 1000 hospital stays
- Medication errors avoided due to barcoding scanning alerts
- Decrease in time from order to administration
- Decrease in delayed administration of medications
- Reduction in medication errors and near misses

Increasing Operational Efficiency

- Reduction in medical record staff costs
- Reduction of transcription costs
- Reductions in patient length of stay
- Saving to due to reduction of medical records management
- Additional patients seen per month per GP



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HIMSS Europe

7-8 October 2015
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THANK YOU!

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HIMSS Europe

7-8 October 2015
Valencia, Spain

INFORMATION TECHNOLOGY AND DRUG MANAGEMENT IN IRCCS CANDIOLO

Franca Goffredo
Pharmacy - Candiolo Cancer Institute

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Oveview



CANDIOLO  **Fondazione
del Piemonte
per l'Oncologia**

**ISTITUTO PER LA RICERCA
E LA CURA DEL CANCRO
CANDIOLO**

Presidio Ospedaliero accred. ex art. 43 L.833/78



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Outline

- The Cancer Institute of Candiolo
- The introduction of the new Hospital Information System Software
- The drug workflow
- To weigh up the pros and cons after 2 years
- Conclusions



Overview

The Institute for Cancer Research is a private non-profit institution founded and supported by the Fondazione Piemontese per la Ricerca sul Cancro-Onlus (FPRC)

It's operated by the Fondazione del Piemonte per l'Oncologia (FPO: a joint venture between the FPRC and the Piedmont Region). It's part of the Piedmontese Oncological Network

The FPRC provides enduring fund raising to complete and develop the Institute's buildings and technologies to foster research.

The FPO is responsible for managing the clinical organization and patients care (150 beds)

It is linked to the Department of Oncology of the University of Torino.

Its mission is a significant contribution to fight cancer, by understanding the basics, and by providing *state-of-the-art* diagnostic and therapeutic services. The core of the Institute is the interface between molecular biology and medicine.



A few numbers

- Total hospital beds : 150
Year 2014
- Patients from Italy: 5.600
- Patients from European countries: 1.100
- Day Ward Treatments: 10.600
- Chemoterapy preparations : 20.900
- Surgical operations: 2.720
- Ambulatory Care Visits: 1.159.600



Pharmacy Staff

- The Pharmacy Service includes:
- 4 pharmacists
- 2 pharmacists specialising in Hospital Pharmacy
- 1 Pharmacy student (preparing his/her thesis)
- 6 technicians
- 2 people involved in administrative activities
- Drug store keepers and support staff



Pharmacy activities

- It's responsible for :
- Supplying and distributing drugs for in and out patients (drugs are dispensed at patient's discharge, with all oral chemotherapies)
- Supporting Formulary Service activities and Ethics Committee activities, promoting appropriateness of drugs use
- Receiving, storing and dispensing investigational drugs, attending start up meetings, monitoring visits, responsible for drug accountability
- Producing IV therapies including mabs, Pain control therapies, supportive care therapies for a total of about 55.000 preparations per year, for adults only



Pharmacy Activities

- The Pharmacy is not yet considered a place where you find high technologies
- We have 2 Baxa pumps which are used particularly for filling elastomeric pumps
- We are moving to complete automation because we think that technology can give us high support for improving:
 - Patients' safety,
 - Personnel safety
 - quality
 - recording process
- Save:
 - money (high cost of oncology drugs)
 - time



Focus on Antineoplastic production and management

The change of Process

Centralization Cytotoxic preparation :

- Reduce Occupational Exposure
- Reduce microbiological contamination
- Clinical Risk Management
 - Preventing medication errors in prescription-administration processes
- Medications cost reduction
 - over 30% of antineoplastic drugs expenditure

The Pharmacy has had its own information tool since starting in 1998



RICOWIN - Programma di Gestione Ricoveri - V. 5.5.59

Paziente Liste d'Attesa/PreRicoveri Spedalità Degenza Medico Degenza Infermiere Configurazione Utilità Aiuto

Liste d'Attesa - PreRicoveri

- Inserisci in Lista d'Attesa
- Gestione Lista d'Attesa
- Richiama dalla Lista d'Attesa
- Programma Prericoveri

Gestione Amministrativa

- Accettazione
- Gestione
- Dimissione

Degenza - Medico

- Visita d'ingresso
- Diario Clinico
- Prescrivi Terapia
- Richieste Esami
- Lettera Dimissione
- Archivio Dimessi

Degenza - Infermiere

- Presenti nel Reparto...
- Occupi Letto
- Controlla Richieste Inviato
- Pianificazione Terapie
- Preparazione Terapie
- Somministrazione Terapie
- Distribuzione Terapie Dom.
- Magazzino di Reparto

Preparazione Letti

SANI7S01/BABELE LAB7W001 User: SOTTILE

Realizza Chiudi

Inisci supporto X Cancella supporto Rinnova terapia X Cancella rinvio Chiudi

Preparazione Sospendi terapia Riprogr. terapia Assegna medico Assegna tecnico

58 kg Superficie corporea 1,6 mq Data di nascita 20/12/1949 Sesso F Creatinina serica 0 mg/dl Clearance 0 ml/min

Cl	Seq	Protocollo	Preparazione	Farmaco	Dose P.	Var	Dose E.	Scadenza	Presc	St	Prep	So
3	1	NNB MonoCT	NAVELBINA	VINORELBINA	48	0	48		N	E	N	
3	1	PLASIL 2 fiale	PLASIL 2 fiale	METOCLOPRAMIDE 10mg/2ml	20	0	20		N	E	N	
3	1	LAVAGGIO 100 ml di SF	LAVAGGIO 100 ml di SF	SOLUZIONE FISIOLOGICA	100	0	100		N	E	N	
3	1	FLEBOCORTID 200 mg	FLEBOCORTID 200 mg	IDROCORTISONE	200	0	200		N	E	N	
15	1	HERCEPTIN adjuvante	TRASTUZUMAB	TRASTUZUMAB	330	0	330		N	E	N	
1	1	FDL-FOX 5 NON USARE	OXALIPLATINO	OXALIPLATINO	140	-20	112		N	E	N	
1	1	FDL-FOX 5 NON USARE	LEDERFOLIN	CALCIO LEVDFOLINATO	140	-20	112		N	E	N	
1	1	FDL-FOX 5 NON USARE	FLUOROURACILE	FLUOROURACILE	3360	-20	2688		N	E	N	
1	1	FDL-FOX 5 NON USARE	FLUOROURACILE	SF q.b a	240	0	240		N	E	N	
1	1	FDL-FOX 5 NON USARE	FLUOROURACILE	FLUOROURACILE	560	-20	448		N	E	N	
1	1	ZOPRAN 1 fiale	ZOPRAN 1 fiale	ONDANSETRON f. da 8 mg	8	0	8		N	E	N	
1	1	LAVAGGIO 100 ml di SF	LAVAGGIO 100 ml di SF	SOLUZIONE FISIOLOGICA	100	0	100		N	E	N	
1	1	SOLDESAM 8 mg	SOLDESAM 8 mg	DESAMETASONE 4 mg/1ml	8	0	8		N	E	N	
1	8	GEMCITABINA MonoCT 1000/	GEMCITABINA	GEMCITABINA	1450	0	1450		N	N	N	I
1	8	PLASIL 2 fiale	PLASIL 2 fiale	METOCLOPRAMIDE 10mg/2ml	20	0	20		N	N	N	I
1	8	LAVAGGIO 100 ml di SF	LAVAGGIO 100 ml di SF	SOLUZIONE FISIOLOGICA	100	0	100		N	N	N	I
1	1	PEC 90	CICLOFOSFAMIDE	CICLOFOSFAMIDE	972	0	972		N	E	N	

(R) Rinvio (A) Annullata Preparazione scaduta Somministrazione odierna Selezione Corrente

Tecnico preparatore: BERGERO MARINA

Tecnico ausiliare:

Medico prescrittore:

3,9% 100 ml*

The ward informatization process started in the year 2006 with a homemade software called – RICOWIN – for Admission

New Hospital Information System Software

ICT: the new Hospital Information System Software

In 2013 we moved to Healthcare Systems
by Dedalus for hospital and clinical management:

Dedalus Hospital Information System: Arianna

- Booking for Outpatient Service
- ADT
- Computerized Physician Order Entry
- Document Repository
- Digital signature

Interoperability

Dedalus Clinical Information System

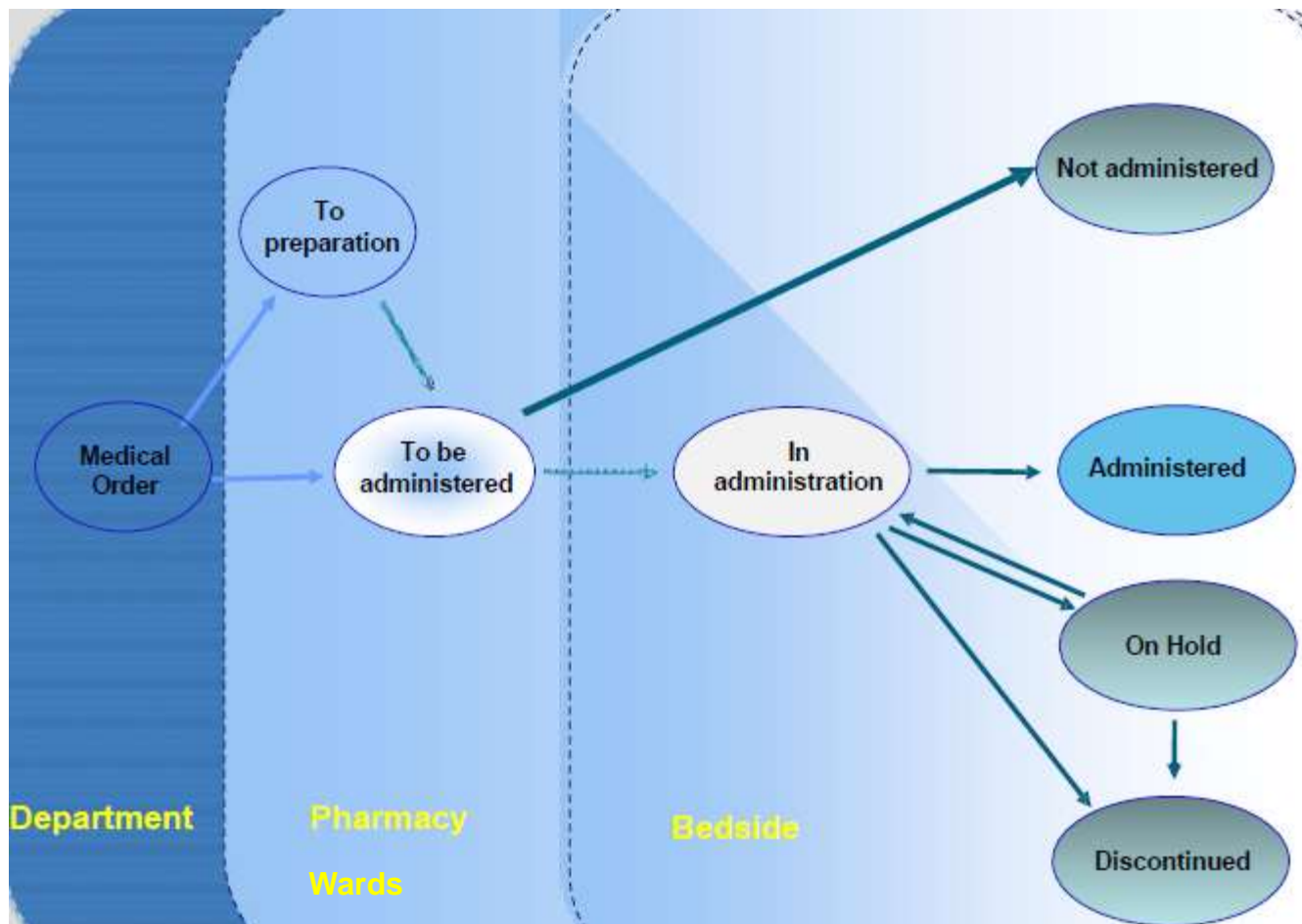
- EMR: Tabula Clinica
- Surgical Pathway: Ormaweb
- Drug Lifecycle Management: FarmaSafe@



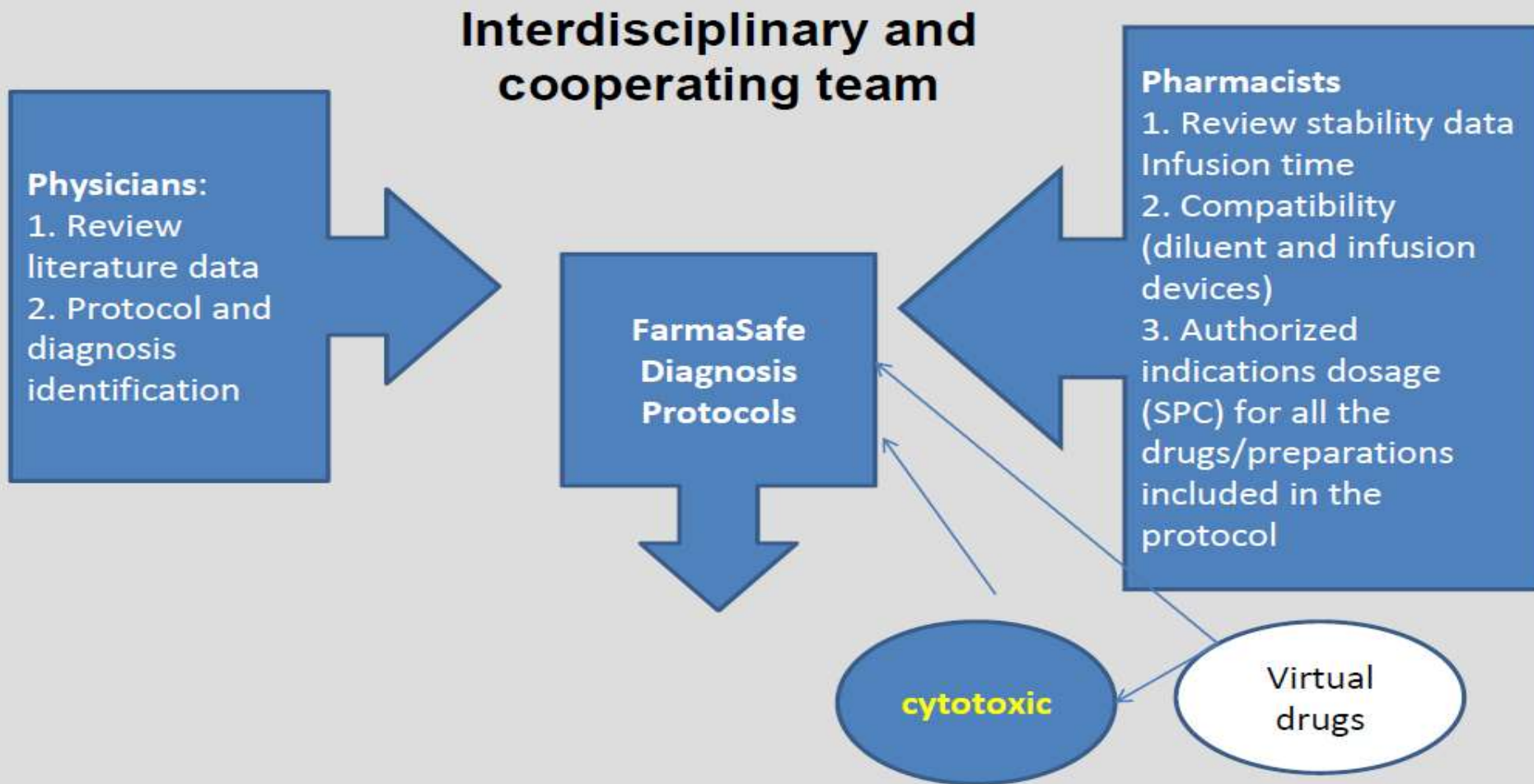
Dedalus
HEALTHCARE SYSTEMS GROUP



The tracking path of medications: the closed loop



New chemotherapy protocol definition



Pharmacy Workload

- Chemotherapy Protocols: 434
- Virtual drugs: 923
- Umaca: 143
- Preparations (Pharmacy) : 171
- Preparations (Wards) 122



Drugs and preparations

SIOweb

UMACA-NUTRIZIONE AREE FUNZIONALI Logout Cambio Password Aiuto Contatti

FUNZIONI CAMBIO FARMACIA LABORATORIO Utente: COFFREDO FRAMCA mercoledì 22 aprile 2015

Plani lavoro di Farmacia
USI
Gestione farmaci
Gestione protocolli
Diagnosi
Fasi
Protocolli - Lista
Consegna farmaci

SCHEDE PROTOCOLLO ID 2620

Accronimo* Cadenza* Inizio Val.* Fine val. Interv.Fissi Inattivo Disattivo immediato
 PCC 150 21 04/02/2012
 Descrizione* Sperimentale Tipo
 SFU 500 ng - EPI 100 ng + CTX 500 ng 1/21 Chemioterapico

NOTE (max 600 caratteri) Diagnosi Fasi
 Apreptati Tumori della mammella femminile

COMPONENTI PROTOCOLLO

Tela 7 Schema di somministrazione

Descrizione	Via di somministrazione*	Tempo (in min)*	Giorni
Desametasone in fisiologica 100 ml (VU)	ev-fusione	10	[1]
DESAMETASONE (PREP UMACA)	Dose* 12 Dos.Mas.	Unità di misura* MLLIGRAMMI	Unità di rip* esecuto
FISIOLOGICA 100ML	Dose* 100 Dos.Mas.	Unità di misura* MLLITRI	Unità di rip* esecuto
granisetron 2mg in fisiologica 100ml (VU)	ev-fusione	15	[1]
GRANISETRON 2MG FIALA	Dose* 2 Dos.Mas.	Unità di misura* MLLIGRAMMI	Unità di rip* esecuto
FISIOLOGICA 100ML	Dose* 100 Dos.Mas.	Unità di misura* MLLITRI	Unità di rip* esecuto
Ciclofosfamide in glucosio 5% 250 ml (VU)	ev-fusione	30	[1]
CICLOFOSFAMIDE (PREP UMACA)	Dose* 500 Dos.Mas.	Unità di misura* MLLIGRAMMI	Unità di rip* sup. corp
GLUCOSIO 5% 250ML	Dose* 250 Dos.Mas.	Unità di misura* MLLITRI	Unità di rip* esecuto
Rivociclovir in fisiologica 100 ml (VU)	ev-fusione	10	[1]

Salva Duplica Stampa Stampa modulo protocollo Disattiva Lista precedente

Breast Cancer Protocol list

The screenshot shows the Farmasafe web application interface. The browser address bar displays 'http://farmasafe.farmacospi/'. The page title is 'Farmasafe'. The navigation menu includes 'UMACIA-AUTORIZZAZIONE', 'AREE FUNZIONALI', 'Login', 'Cambio Password', 'Aiuto', and 'Contatti'. The user is logged in as 'Goffredo Franca' on 'mercoledì 22 aprile 2015'. The main content area is titled 'RICERCA PROTOCOLLI' and contains a search form with fields for 'Acronimo', 'Descrizione', 'Includi non attivi', 'Id', 'Tipo Protocollo', and 'Diagnostici'. Below the search form is a table titled 'LISTA PROTOCOLLI' with the following data:

Id	Acronimo	Descrizione	Validità	Operatore	Data Modifica
2006	ABRAXANE 266 mg/m2	paclitaxel albumina 266 mg/m2 (ABRAXANE)	valido 08/02/2013	GOFFREDO*FRANCA	18/05/2013
2011	AC adjuvante	ciclofosfamida+doxorubicina	valido 31/01/2013	EMRICO*FIORERZA	22/08/2014
2023	ADM (30) SETTIMANALE	Doxorubicina 30 mg/m2 SETTIMANALE	valido 04/02/2013	GOFFREDO*FRANCA	16/05/2013
2066	ADM (50) Paclitaxel 175 1/21	Doxorubicina 50 mg/m2 Paclitaxel 175 mg/m2	valido 12/02/2013	GOFFREDO*FRANCA	14/05/2013
2045	Bevacizumab 7.5 mg/kg MonoT	Bevacizumab 7.5 mg/kg MonoT 1/21	valido 11/02/2013	GOFFREDO*FRANCA	11/05/2013
2373	BIG 4-118035136/TC4929G	Perituzumab/Placebo+Trastuzumab mantenimento	valido 19/07/2013	GOFFREDO*FRANCA	02/08/2013
2336	BIG 4-118035136/TC4929G c	Perituzumab/Placebo+Trastuzumab+Paclitaxel carico	valido 28/05/2013	GOFFREDO*FRANCA	02/05/2013
2307	BIG 4-118035136/TC4929G m	Perituzumab/Placebo+Trastuzumab+Paclitaxel mant	valido 05/07/2013	GOFFREDO*FRANCA	02/05/2013
2414	B027938 KATHERINE Br A	Trastuzumab vs Trastuzumab emtansina 1° DOSE	valido 22/11/2013	GOFFREDO*FRANCA	22/11/2013
2415	B027938 KATHERINE Br A succ	Trastuzumab vs Trastuzumab emtansina dose success	valido 22/11/2013	GOFFREDO*FRANCA	22/11/2013
2416	B027938 KATHERINE Br B car	Trastuzumab carico vs Trastuzumab emtansina	valido 22/11/2013	GOFFREDO*FRANCA	22/11/2013
2417	B027938 KATHERINE Br B mant	Trastuzumab mantenim vs Trastuzumab emtansina	valido 22/11/2013	GOFFREDO*FRANCA	22/11/2013
2109	Coelyx (38) 1/21	Doxorubicina Clor Liposomiale 30 mg/m2	valido 28/03/2013	GOFFREDO*FRANCA	24/04/2013
2100	Coelyx (38) 1/28	Doxorubicina Clor Liposomiale 30 mg/m2	valido 28/03/2013	GOFFREDO*FRANCA	28/03/2013

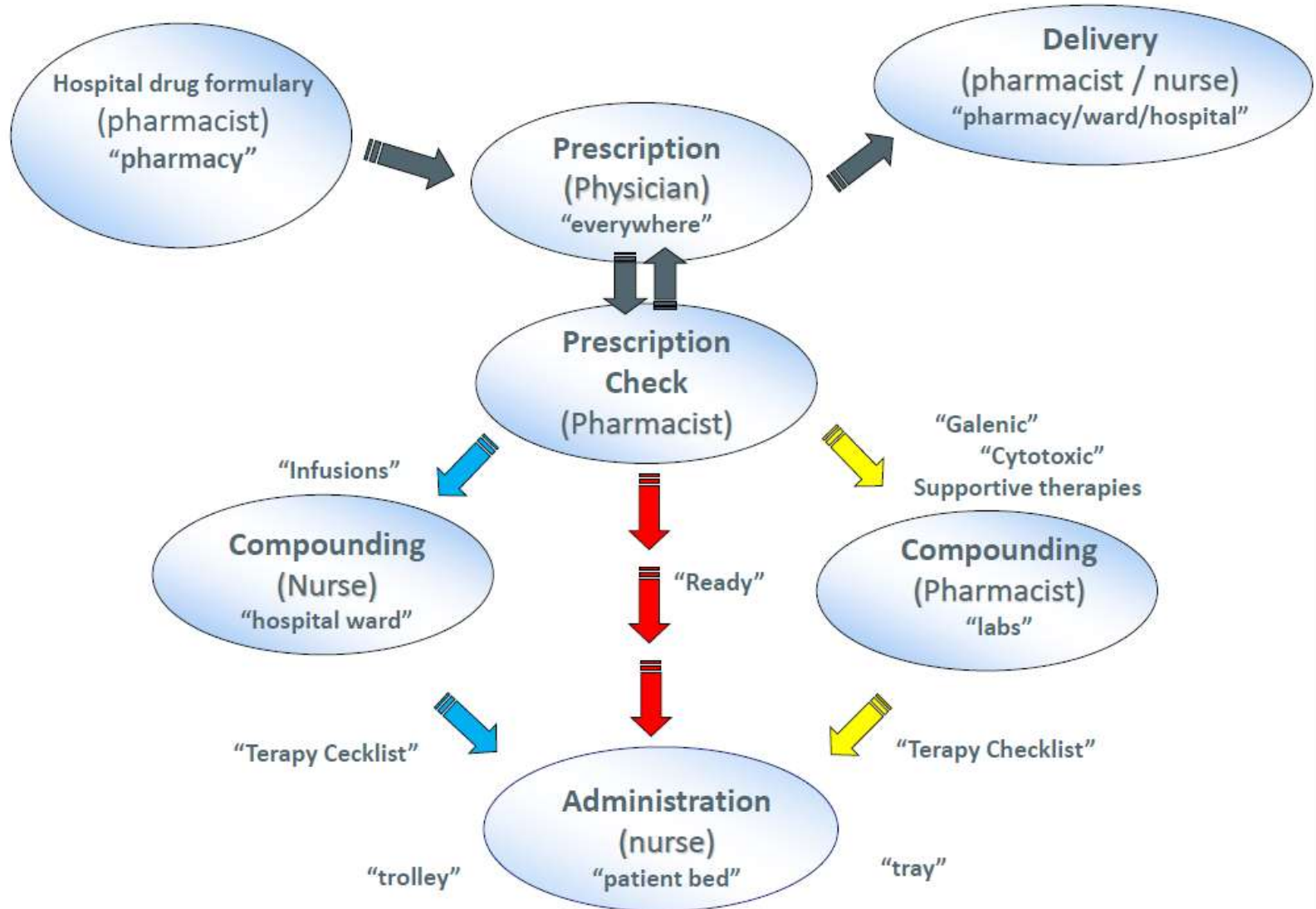
Administration Schedule

The screenshot displays the FARMASAFE web application interface. The browser address bar shows the URL <https://farmasafe.farmacipi/>. The page title is "SISTEMA DI SOMMINISTRAZIONE PROTOCOLLO FED 100". The user is identified as "GOTTREDO-FRANCA" and the date is "venerdì 22 aprile 2015".

The main content area shows a table of medication administration sequences for "GIORNO 1". The table includes columns for "Sequenza", "Durata nella sequenza", "Richiesta conferma", "Preparazione", and "Note".

Sequenza	Durata nella sequenza	Richiesta conferma	Preparazione	Note
1	40 min. Farmaco desamfetone in fialogica 100 ml (VU)	<input type="checkbox"/>	Preparazione: Unica	
2	 Farmaco grandetran 3mg in fialogica 100ml (VU)	<input type="checkbox"/>	Preparazione: Unica	
3	 Farmaco clobazepam in fialogica 5% 250 ml (VU)	<input type="checkbox"/>	Preparazione: Unica	
4	 Farmaco FISIOLGICA 100ML	<input type="checkbox"/>	Preparazione: Unica	
5	 Farmaco CIPROHEPTADINA (PRDFUMACA)	<input type="checkbox"/>	Preparazione: Unica	amministrato nel corso di una fisiologica
5	 Farmaco FISIOLGICA 250ML ECOPLAC	<input type="checkbox"/>	Preparazione: Unica	
6	 Farmaco fluoruracile in fialogica 100 ml (VU)	<input type="checkbox"/>	Preparazione: Unica	

Medication Workflow





Prescription record



Prescription drug order

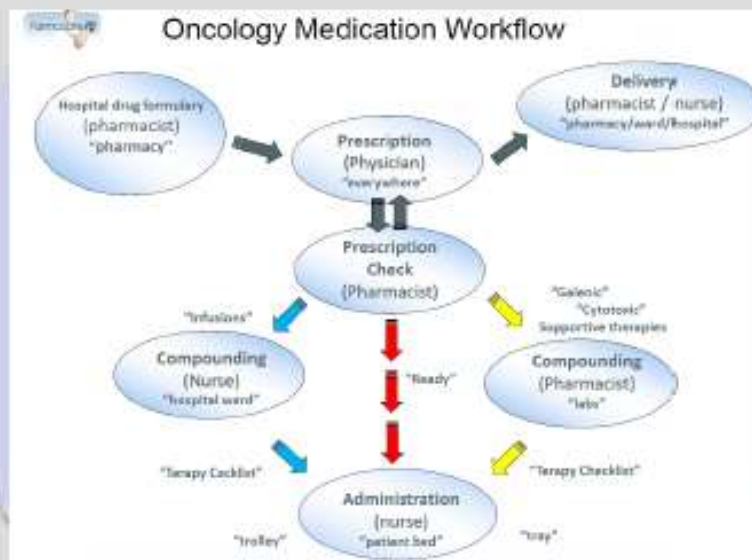
Compounding records and reports

Compounding label

Container label

Cancer protocol report

Historical report



Drug Therapies Report

Cart Summary

Working plan activities

Synoptic treatment

Active treatments

Drug Delivery

Administration

Extended codification to a “7th ATC level”:
Substance, Pharmaceutical Form, Dosage

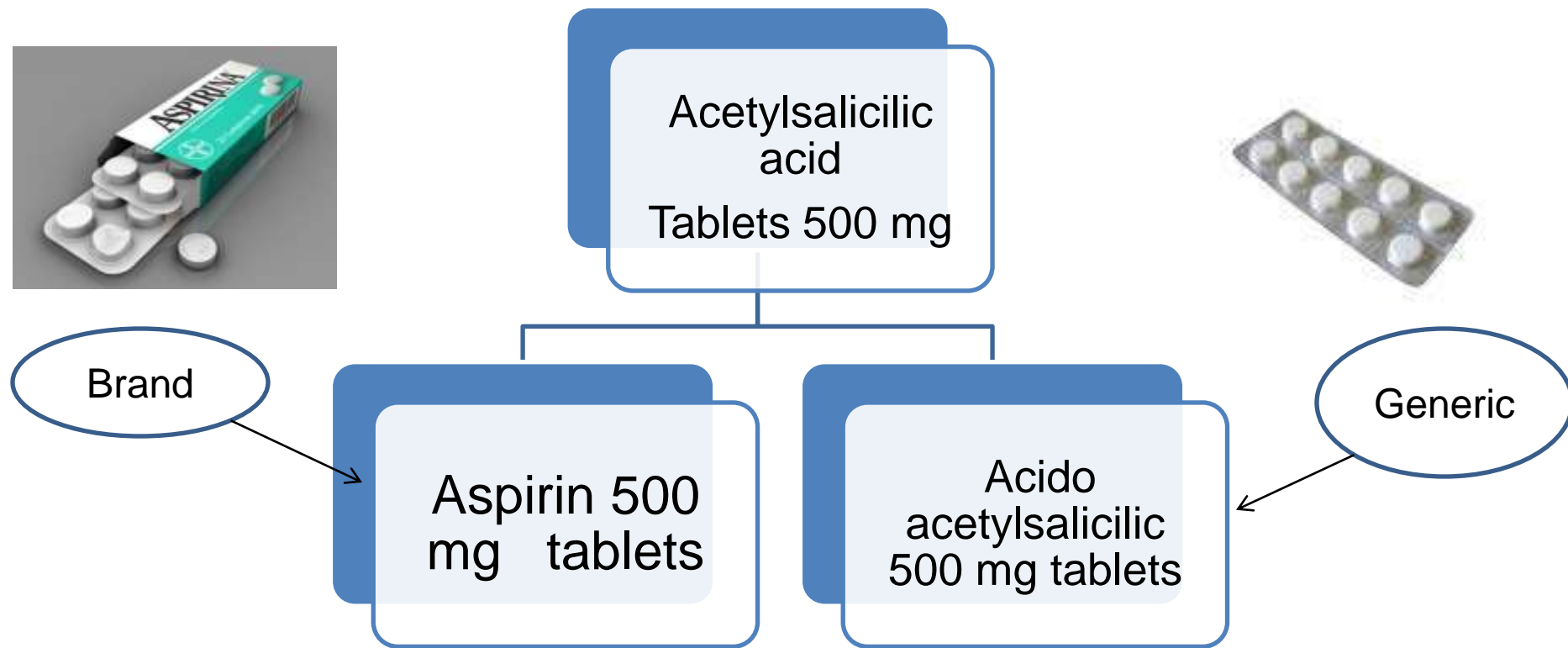
Level	ATC codification	Description	Reference
1°	A	Gastrointestinal system and metabolism	Anatomic
2°	02	Medicines related to acid secretion disorders	Therapeutic
3°	B	Medicines for the peptic ulcer treatment	
4°	C	Acid pump inhibitors	
5°	01	Omeprazole	Chemical
6°		Oral capsule	Pharmaceutic form
7°		20 milligrams	Dosage



The virtual Drug ensures
the real equivalence of Medicine Drugs

Virtual Drug

Virtual Drug is a combination of Medicines



Regional tenders : issues

- The virtual drug can help physicians in selecting the active substance and nurses in administering the correct Medicinal products associated with it
- Medicinal products are bought through regional tenders
- Quick variations in tradenames
- Risk of medication errors on the wards





Virtual drug



Paracetamol vial 1 g

Tradename

- Perfalgan vial 1 g

Tradename

- Paracetamol Teva vial 1 g

Tradename

- Perfusalgan vial 1 g

Evaluations after 2 years of activity

We are able to know at anytime

- Patients: who, when, what medicine received,
- At which point of the path is the drug
- Responsibility for each health care professional involved in the process
- The cost of the therapies for
 - ✓ the management of the budget
- The drug data flow to be sent to the region
 - For reimbursement
 - For monitoring



Evaluations after 2 years of activity

- ✓ The transition to the new system was not free of resistance
- ✓ It was not easy to move all at once from one programme to another, in June 2013
- ✓ Health care professionals found many problems and were not always available to solve them, sometimes they emphasized them (resistance to change)
- ✓ We had the assistance of the software personnel for one year
- ✓ After a while we started to cooperate
- ✓ Now it is integrated with the robot software

Conclusions

- Drug management : the programme is very useful for nurses on the wards
- Pharmacists can monitor the process
- It is useful for hospital managers
- Modifications needed are not immediate as with the previous programme (Pharmacy)
- More expensive

In conclusion : positive evaluation



HIMMS STAGE 6

April 2015



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LaFe
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ciosummit
HIMSS Europe

7-8 October 2015
Valencia, Spain

THANK YOU!

Franca Goffredo
Pharmacy - Candiolo Cancer Institute
franca.goffredo@ircc.it

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www.hitciosummit.eu

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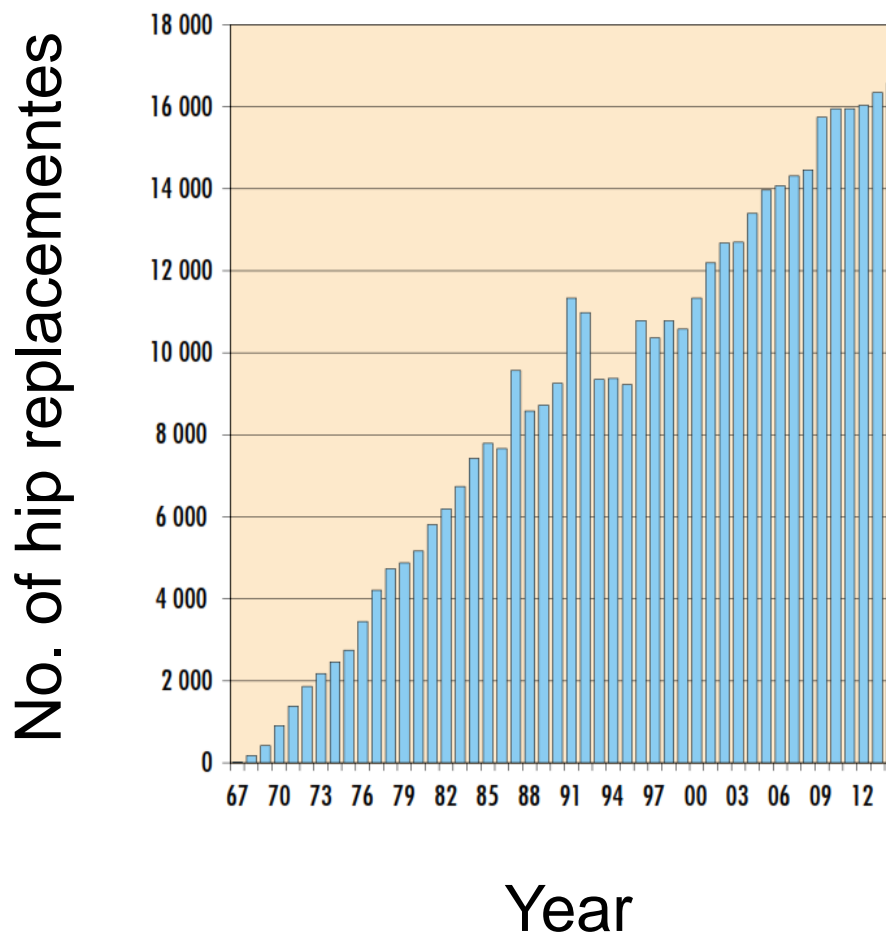
ciosummit
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Valencia, Spain

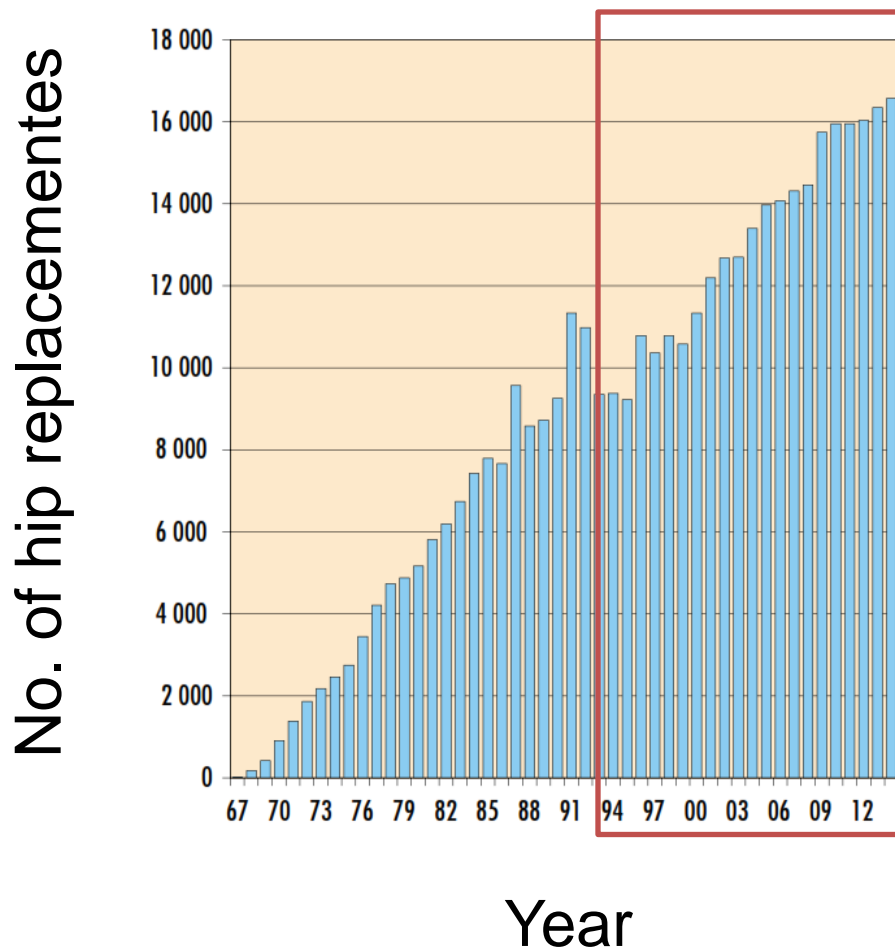
IMPLEMENTATION OF VALUE BASED HEALTH CARE IN JOINT REPLACEMENT UNIT AT SAHLGRENKA UNIVERSITY HOSPITAL

Maziar Mohaddes
MD, PhD

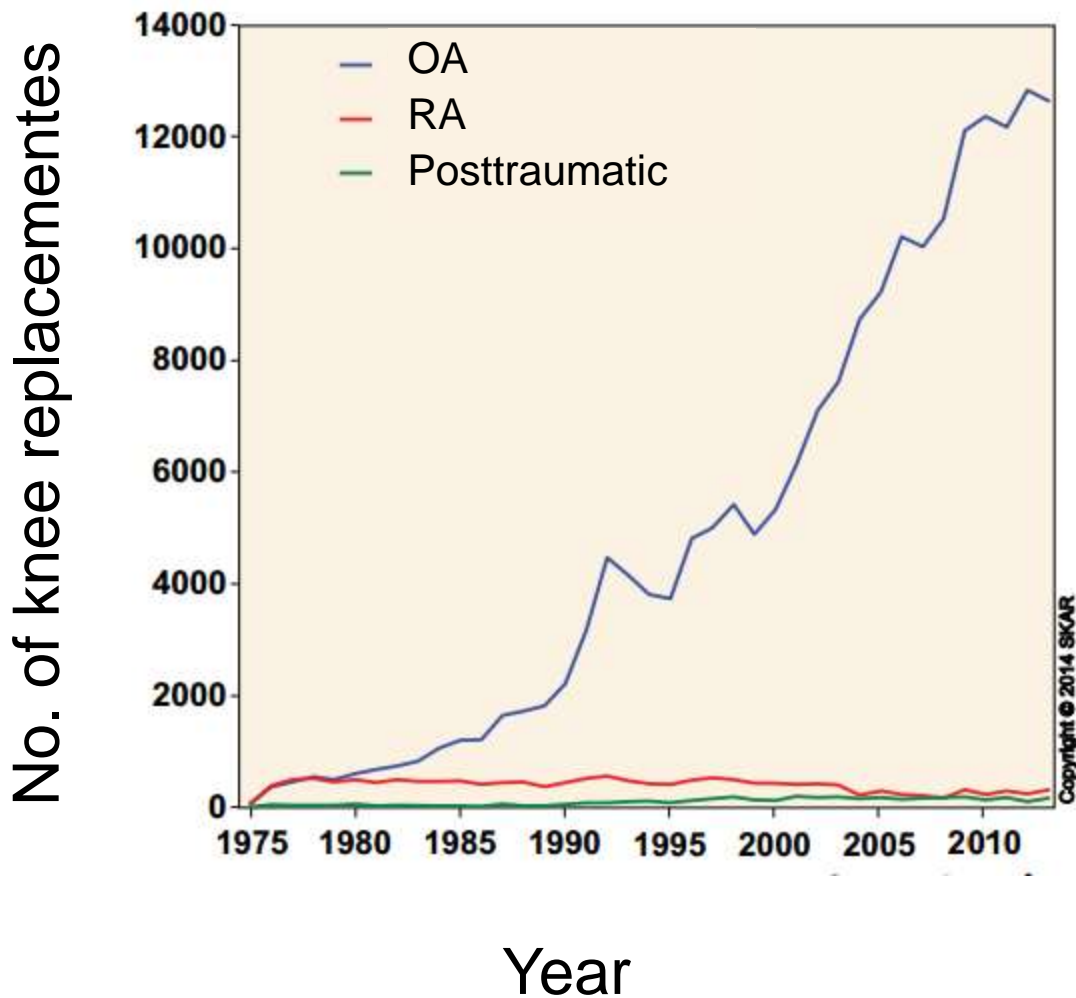
Background



Background



Background



New Public Management

- New Public Management
- Competition between health care providers*
- Patients regarded as customers

*Hood, C. (1995). The new public management in the 1980s: variations on a theme. *Accounting, Organizations and Society*, 20(2), 93-109.

New Public Management

- New Public Management
- Competition between health care providers*
- Patients regarded as customers
- Process and costs measured and compared
- The patient outcomes were measured but not were included in comparisons

*Hood, C. (1995). The new public management in the 1980s: variations on a theme. *Accounting, Organizations and Society*, 20(2), 93-109.

New Public Management – orthopaedic view

WELCOME TO DAY 2 OF TRAINING



Today's subject is
"How to screw a customer and
make him feel good about it"

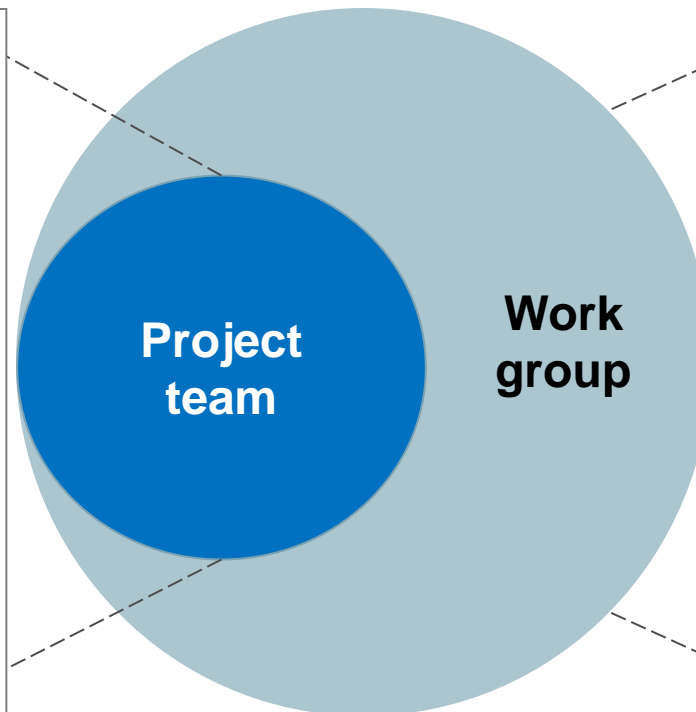
Value Based Health Care

$$\text{Value} = \frac{\text{Outcome}}{\text{Cost}}$$

Value Based Health Care

Project team

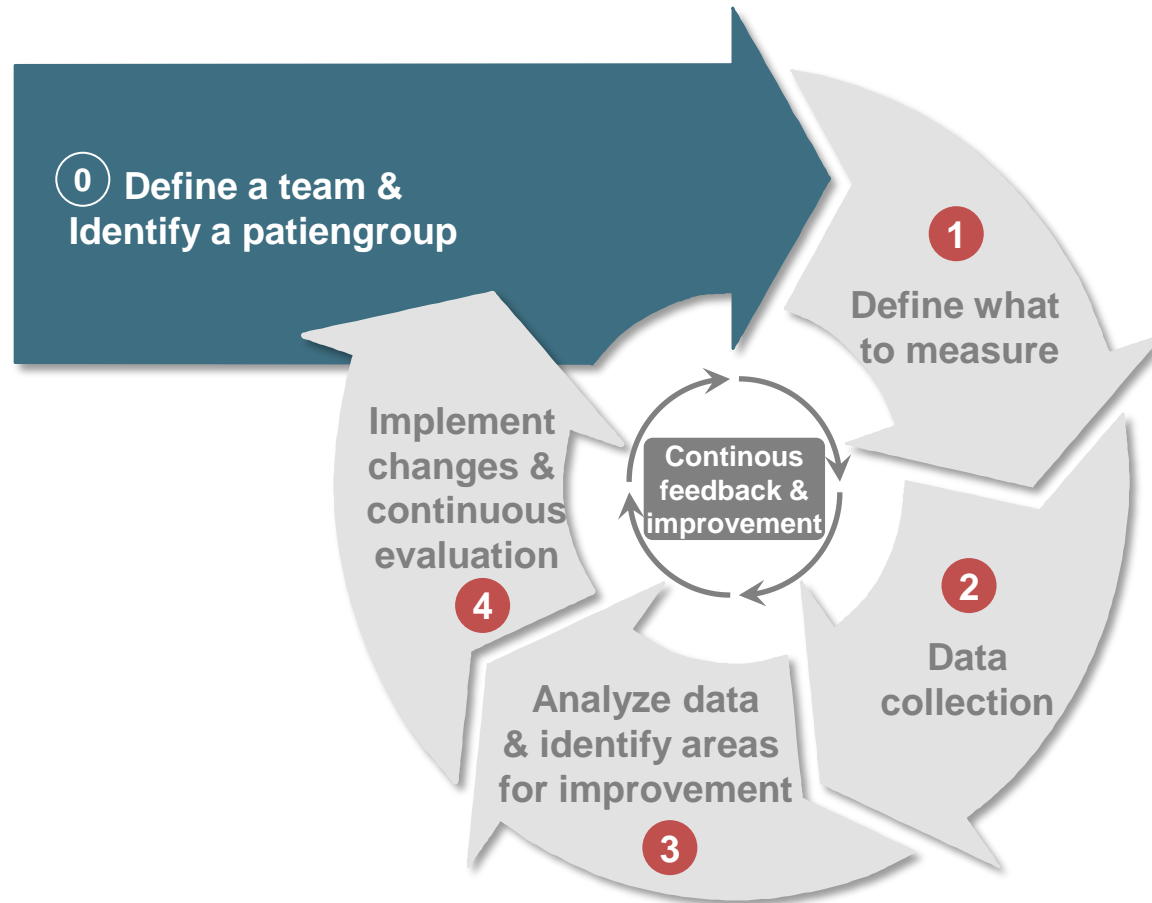
- Marie Friberg,
- Ola Rolfson,
- Jenny Gårdmark-Hylén,
- Victoria Mohlén
- Maziar Mohaddes



Work group

- Staffan Skarrie
- Åsa Sand
- Magnus Karlsson
- Lena Danemo
- Eva Levin
- Erik Houltz
- Marie Björk
- Jenny Hempel
- Katarina Dahlgren
- Jonas Thanner
- Emma Svensson
- Henrik Malchau
- Per-Olof Holmberg

Value Based Health Care



Value Based Health Care

Clinical outcomes

Adverse events

-3,2 %



Re-operation within 2 years

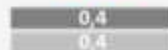
-0,4 %



Data from the SHAR

EQ-5D improvement

-0,0



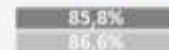
Pain reduction

-0,8



Satisfaction with the outcome

-0,8 %



Cost & utilization measures

Cost per patient (median)

-6,96



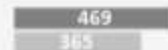
Cost of implants (median)

+5,29



Nr. of surgeons

+104



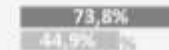
LOS

-00:10



% admitted on day of surgery

+28,9%



Process measures

% cancelled within 24 h

-5,0%



% treated with physiotherapy preop

+4,9%



days:hours in the waiting list

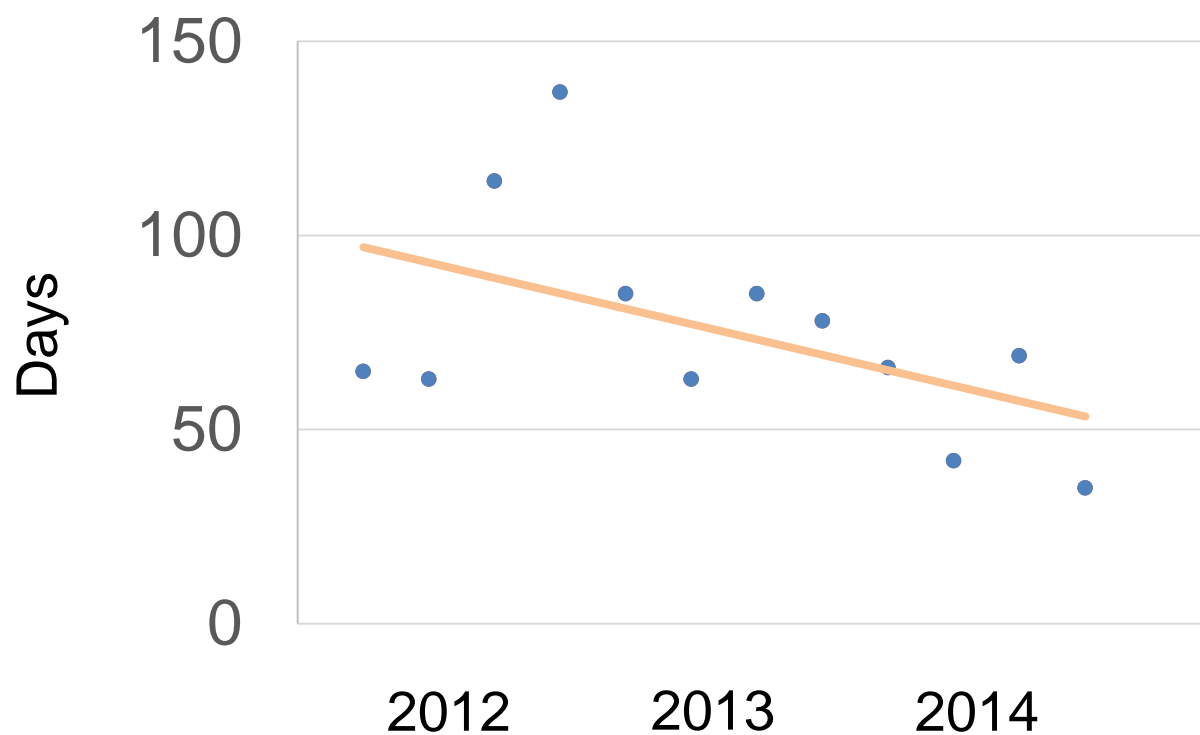
-26:21



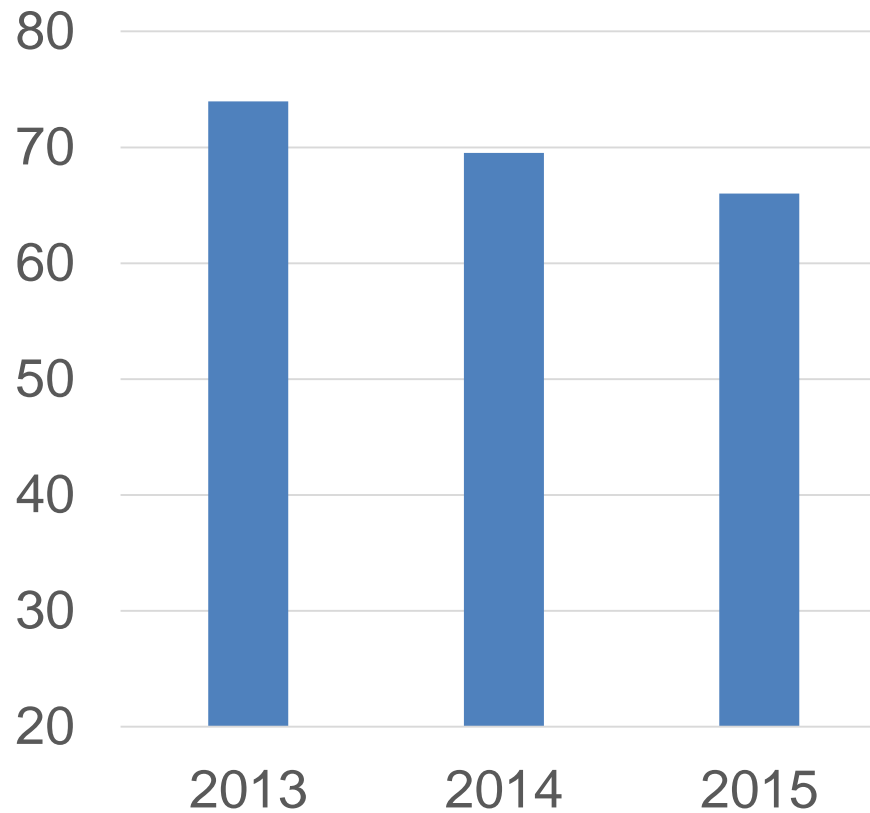
■ Last 12 month
■ Previous 12 month

Outcomes 2014

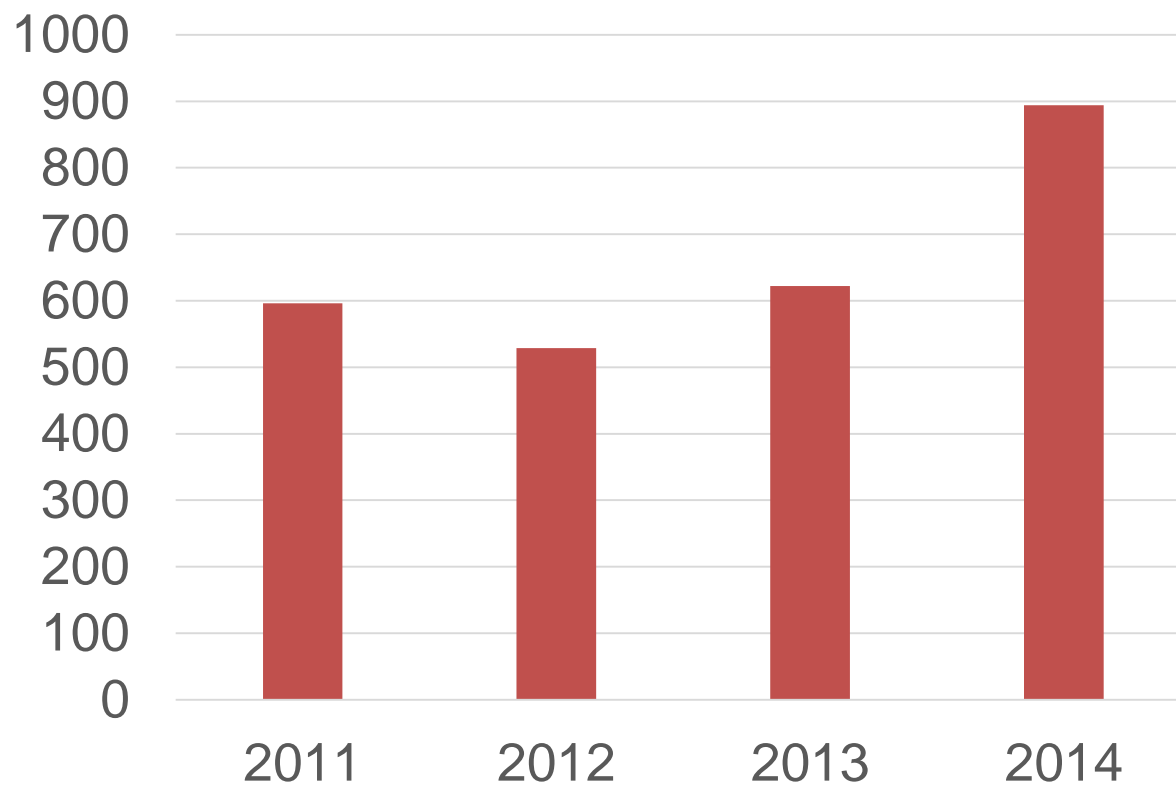
No of days in the waiting list



Cost per patient



No of surgeries performed



Clinical outcomes

Clinical outcomes

Adverse events*

-3,2 %



Re-operation within 2 years

-0,4 %



Satisfaction with the outcome

+1,8 %



Process measures

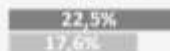
% cancelled within 24 h

-5,0%



% treated with physiotherapy preop

+4,9%



days:hours in the waiting list

-26:21



Cancelled by surgery

+8,9%



Process measures

■ Last 12 month
■ Previous 12 month

* Urinary tract infections, wound infections, transfusions, fall accidents

Length of stay in the hospital

548

Acta Orthopaedica 2014; 85 (6): 548–555

Traditions and myths in hip and knee arthroplasty

A narrative review

Henrik Husted¹, Kirill Gromov¹, Henrik Malchau^{2,3}, Andrew Freiberg², Peter Gebuhr¹, and Anders Troelsen¹

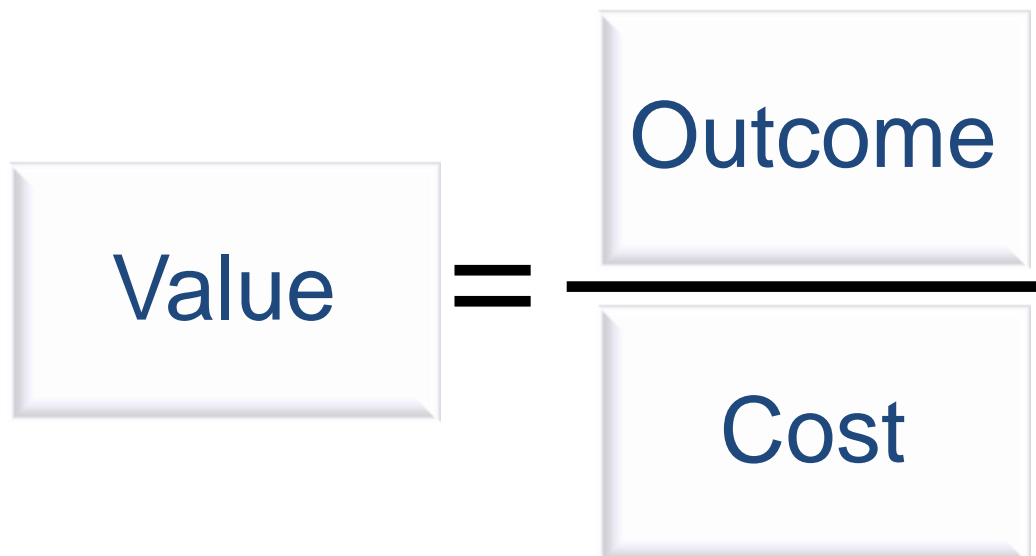
Departments of Orthopaedic Surgery, ¹Copenhagen University Hospital Hvidovre, Copenhagen, Denmark; ²Massachusetts General Hospital, Boston, MA, USA; ³Sahlgrenska University Hospital, Mölndal, Sweden.

Correspondence: henrikhusted@dadlnet.dk

Submitted 2014-06-28. Accepted 2014-09-11.

- Ward A
- Ward B

How about the value?

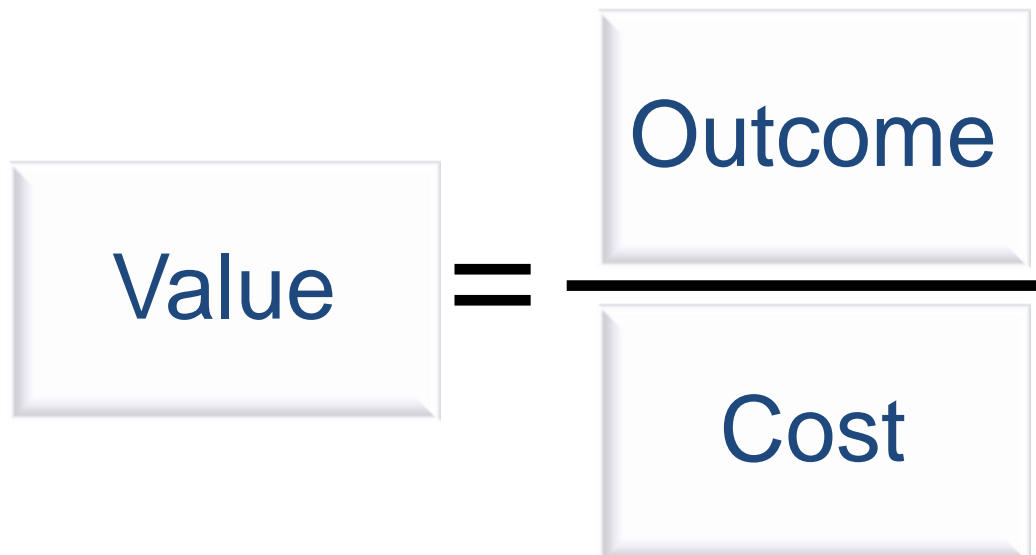


Adverse events ↓ 18%

Re-operations ↓ 17%

No of surgeries ↑ 44%

How about the value?



Adverse events ↓ 18%

Re-operations ↓ 17%

No of surgeries ↑ 44%

During 2014 the value increased with 147%!

How about that value?

Aktie	1D%	1V%	1M%	3M%	12M%
Electrolux B	-0,62	-0,84	22,82	23,77	83,24
Balder B	-0,07	4,82	24,20	49,29	77,01
Loomis B	-0,29	-0,44	10,31	27,35	74,39
Electrolux A	-1,24	-0,92	20,58	23,67	72,53
Securitas B	-0,08	-0,08	20,26	29,87	70,91
Boliden	-0,35	2,30	33,44	32,29	65,00
Peab B	-0,14	2,69	21,67	39,00	63,24
Hexpol B	-0,61	-0,11	8,55	34,69	58,27
Assa Abloy B	0,44	2,21	12,40	22,61	53,29
Axis	0,21	0,27	66,95	73,17	52,31
Autoliv SDB	-0,74	0,27	12,90	27,94	50,92
Husqvarna A	0,39	-1,74	18,90	16,98	50,49
Husqvarna B	0,08	-1,73	19,07	17,04	50,28
Skanska B	-0,10	1,07	15,05	29,29	50,11
Atlas Copco A	-0,74	-0,96	12,28	23,07	49,39

During 2014 the value increased with 147%!

Conclusion

QlikView[®], as a business intelligence system has enabled us to explore and visualise data from different sources. This data visualisation has facilitated our journey in to the Value-Based management.

Presented by:



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THANK YOU!

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maziar.mohaddes@gmail.com