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**EDUCATIONAL
CONFERENCE AND
EXHIBITION**

20-21 MARCH 2015
ANTALYA, TURKEY
Titanic Deluxe Belek, Turkey

www.himssTurkey.org



**CLOSED LOOP
MEDICATION AND
PATIENT SAFETY
STRATEGY AT
VIMERCATE HOSPITAL**

GIOVANNI DELGROSSI - CIO

Organised by

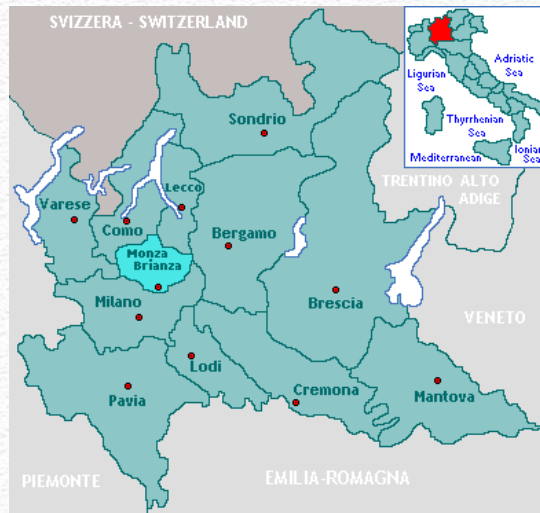


T.C. Sağlık Bakanlığı

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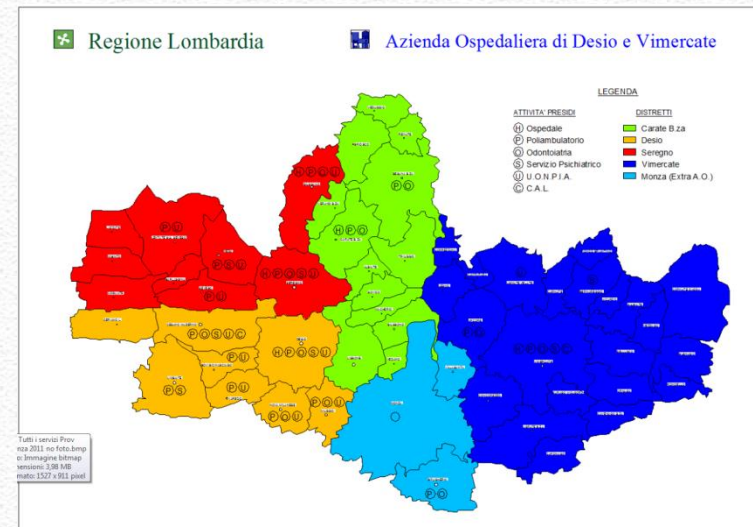
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Vimercate Hospital Trust



Lombardy is the most densely populated Region with 9.917.714 inhabitants spread over 12 Provinces

Province of Monza Brianza is distributed over 405 km² with 850.000 inhabitants



Vimercate Hospital Trust



5 HOSPITAL STRUCTURES

1.290 INPATIENT BEDS

47.000 ADMISSIONS/YEAR

5.5M OUTPATIENT TREATMENTS/YEAR

197.000 EMERGENCY DEPARTMENT VISIT/YEAR

5.500 DELIVERIES/YEAR

24.500 SURGICAL INTERVENTIONS/YEAR

11 OUTPATIENT DEPARTMENTS

4 DIALYSIS CENTERS

6 PSYCHIATRIC CENTERS

9 CHILD NEUROPSYCHIATRIC UNITS

13 DENTAL CENTERS

3.400 EMPLOYEES

Vimercate Digital Hospital



HiMSS
transforming health through IT™

HiMSS
ANALYTICS
STAGE 6
AWARD



HiMSS EDUCATIONAL CONFERENCE AND EXHIBITION
Turkey 20-21 March 2015 | ANTALYA, TURKEY

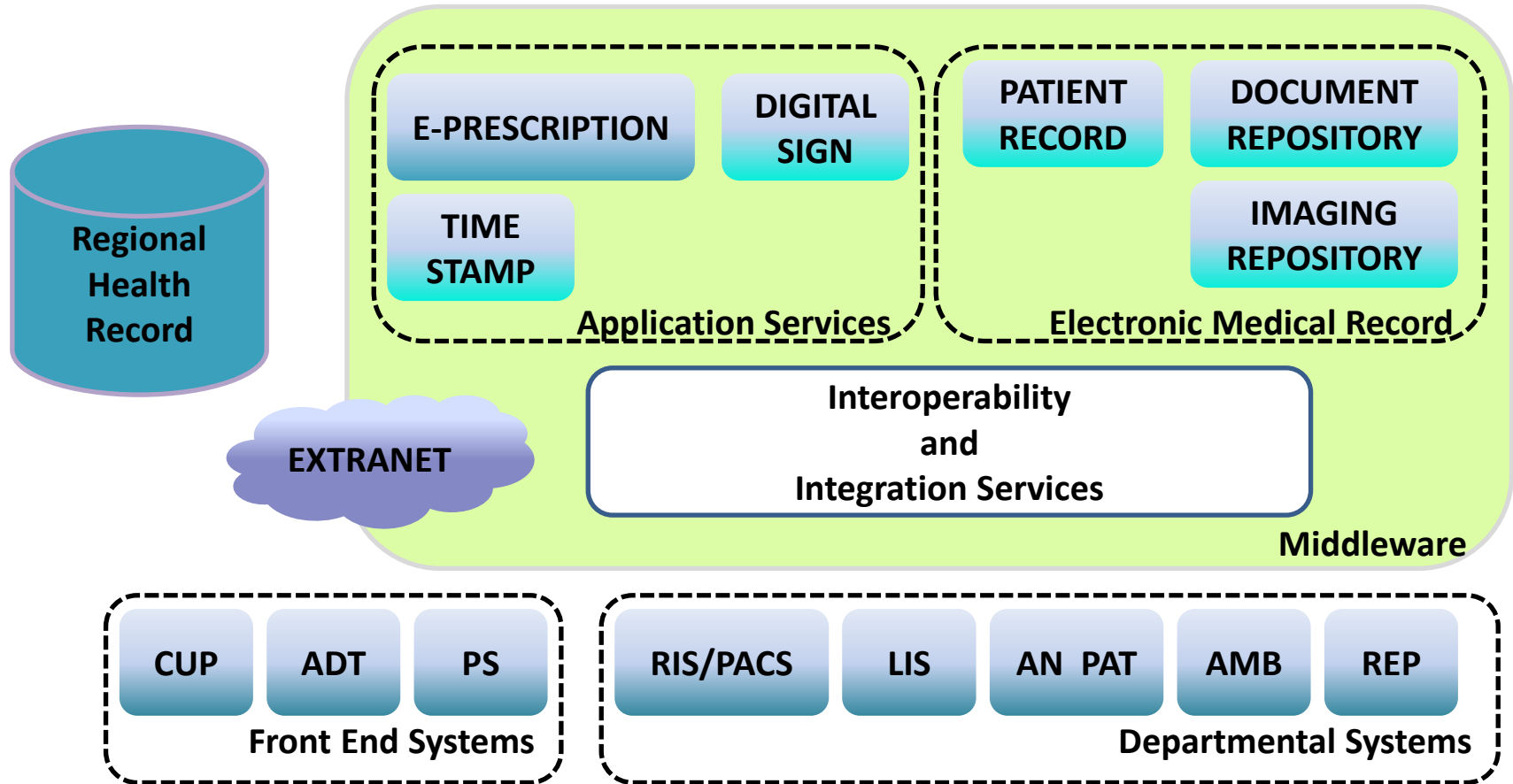
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Software Architecture



Electronic Medical Record – from paper to EMR

- BEDSIDE CLINICAL DATA

- real time data access
- full mobility features
- 300 smart Tablet PC

- APPLICATION USABILITY

- smart functionalities
- “touch” technology

- SYSTEM SECURITY AND INTEGRITY

- Strong and secure authentication
- Data Encryption
- Database synchronization



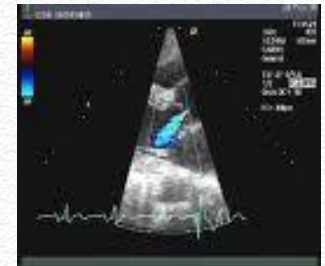
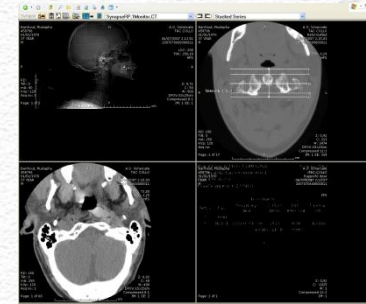
Electronic Medical Record – main functionalities

- PATIENT SECURE IDENTIFICATION
- CLINICAL HISTORY AND DIAGNOSYS
- CLINICAL DIARY
- EXAM ORDER ENTRY AND REPORTS
- DRUG PRESCRIPTION AND ADMINISTRATION
- VITAL SIGNS MANAGEMENT
- EVALUATION RATING CLINICAL SCALES
- NURSES NEED PLAN
- “CLINICAL SUMMARY”

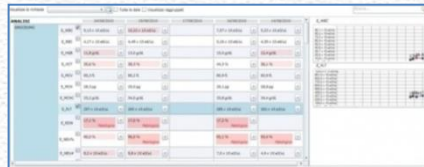


Digital Imaging System – integrated process

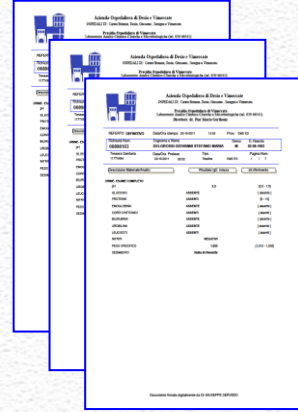
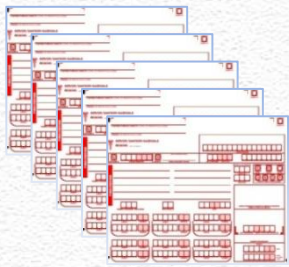
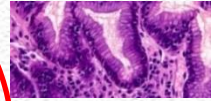
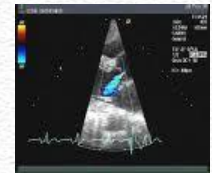
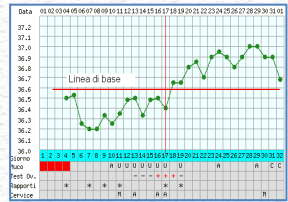
- RADIOLOGY IMAGES
- CARDIOLOGY IMAGES
- ENDOSCOPY IMAGES
- GINECOLOGY IMAGES
- DIGITAL DIAGNOSTIC SYSTEM
- DICOM WORKLIST, STORE, SR
- FULLY INTEGRATED PROCESS



Integrated Electronic Medical Record



Paciyent ID	Paciyent Adı	Yaş	Cinsiyet	Diğer Bilgiler
101	Ali Mehmet	45	Erkek	...
102	Fatma Ayşe	32	Kadın	...
103	Mehmet Emin	60	Erkek	...



500 doctors
1.600 nurses
300 Tablet PC
2.000 PC and VDI

Medication Integrated Process - Unit Dose



Hospital Pharmacy



Processing Site



Hospital Pharmacy

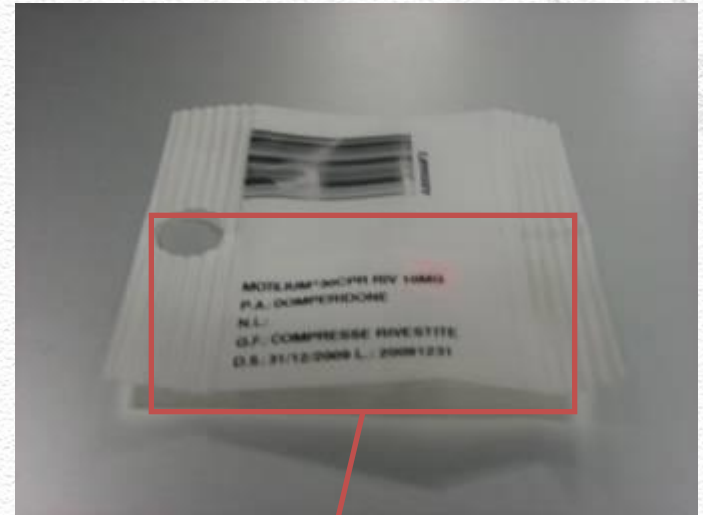


Hospital Ward



Medication Integrated Process – Unit Dose

- Unique Barcode
- Pharmaceutical Specialty
- Active ingredient
- Dosage
- Expiration date
- Pharmaceutical Lot



MOTILIUM*30CPR RIV 10MG
P.A.: DOMPERIDONE
G.F.: COMPRESSE RIVESTITE
D.S.:31/12/2013 L.:2009L239

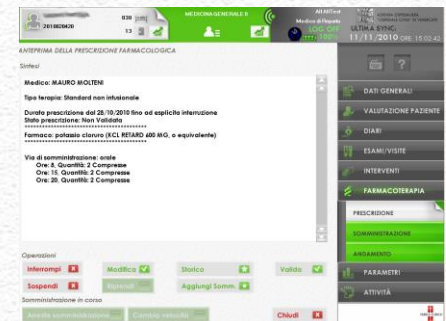
Medication Integrated Process – central preparation

- 6 automated warehouses
- 500 beds managed
- 8 hospital areas served
- 4 daily deliveries
- Unit Dose ward warehouse



Medication Integrated Process - Prescription

- Bedside prescription
- Coded Drug list
- Daily prescription validation
- Basic CDSS functionalities
 - allergy check
 - interaction check
- HL7 real time communication



Medication Integrated Process – Drug Preparation



Automated Warehouse



Drug drawers

Automatic transport system



Ward

Medication Integrated Process – drug cart



- Preparation of drug carts
- Packed drug integration
- Unit Dose integration



Medication Integrated Process - Administration

- Patient Identification through personal wrist barcode scanning
- Unit Dose barcode scanning
- Barcode Check



Medication Integrated Process – Barcode Check



- Perfect Chain: right drug and right unit dose serial code



- Broken Chain: right drug with equivalence but different unit dose code



- Alert: Broken Chain with no equivalence with prescribed drug

Medication Integrated Process – Barcode Check

Ultimo farmaco inserito APIDRA*SC 1 FL 10ML 100U/ML

INSULINA GLULISINA (A03.668.4013 ==> A03.668.4013)

2012003421 - 12/02/2012 11:55
 PAGOT LILIANA
 Nata il 15/02/1942 - F
 Ricov: 3 gg

GIRASOLE

JUNG SOON MARTINOTTI
 Informare
 LOG OFF
 ULTIMA SYNC.
 15/02/2012 ORE: 08:02:43

ACIDO ACETILSALICILICO

Standard non infusionale
 Data: 15/02/2012 - Ora: 12
 ACIDO ACETILSALICILICO (CARDIOASPIRIN*30CPR GAST 100MG o equivalente), 1 Compresse
 Via di somministrazione: ORALE

Farmaci richiesti

Ultimo farmaco inserito CARDIOASPIRIN*30CPR GAST 100MG

CGirasoleSA2, 5: ACIDO ACETILSALICILICO (B0008DC62 ==> B0008DC62)

Pagina 1 di 1 (1)

Passa alla somm. succ. Preparata Salta

2012003050 - 07/02/2012 12:50
 FERRARO MARIA
 Nata il 04/02/1932 - F
 Ricov: 8 gg

GIRASOLE

JUNG SOON MARTINOTTI
 Informare
 LOG OFF
 ULTIMA SYNC.
 15/02/2012 ORE: 08:02:43

POTASSIO CLORURO

Standard non infusionale
 Data: 15/02/2012 - Ora: 12
 POTASSIO CLORURO (KCL RETARD*40CPR 600MG R.P. o equivalente), 2 Compresse
 Via di somministrazione: ORALE

Farmaci richiesti

Ultimo farmaco inserito KCL RETARD*40CPR 600MG R.P.

CGirasoleSA2, 10: POTASSIO CLORURO (A00112BEB ==> A00112BEB)

CGirasoleSA2, 10: POTASSIO CLORURO (A00112BEE ==> A00112BEE)

Pagina 1 di 1 (2)

Passa alla somm. succ. Preparata Salta

Medication Integrated Process – Barcode Check

Pannello Superiore (Sinistra):
 2012003058 - 07/02/2012 14:50
 STRINO GIUSEPPE 493
 Nato il 05/03/1933 - M
 Ricov: 7gg

Pannello Superiore (Destra):
 GIBRASOLE
 JUNG SUNG MARTINOTTI
 ASSENZA OSPEDALIERA "OSPEDALE CIVILE" DI VIMERCATE
 LOG OFF 99%
 ULTIMA SYNC: 15/02/2012 ORE: 08:02:43

Medicazione 1 (Sinistra):
CLOPIDOGREL SOLFATO
 Standard non infusionale
 Data: 15/02/2012 - Ora: 12
 CLOPIDOGREL SOLFATO (PLAVIX*28CPR RIV 75MG, espressamente richiesto), 1 Compresse
 Via di somministrazione: ORALE

Medicazione 2 (Destra):
AMPICILLINA/SULBACTAM
 Standard non infusionale
 Data: 17/02/2012 - Ora: 20
 AMPICILLINA/SULBACTAM (UNASYN*EV 1FL 1G+500MG/3,2ML+F o equivalente), 1 Preparazione iniettabile
 Soluzione Fisiologica, 10 ml

Medicine Richieste (Sinistra):
 Farmaci richiesti
 Inserisci +
 Ultima farmaco inserito: CLOPIDOGREL SOLFATO (PLAVIX*28CPR RIV 75MG)
 C GibrasoleSA2, 6; PLAVIX*28CPR RIV 75MG (A00102FB1 ==> B00073x27)

Medicine Richieste (Destra):
 Farmaci richiesti
 Inserisci +
 Ultima farmaco inserito
 SODIO CLORURO
 AMPICILLINA/SULBACTAM

Barra di Stato (Sinistra):
 Pagina 1 di 1 (1)
 Passa alla somm. succ. Preparata Salta

Barra di Stato (Destra):
 Pagina 1 di 1 (3)
 Completata
 Passa alla somm. succ. Preparata Salta

Menu laterale (Destra):
 FARMACOTERAPIA Somministrazione
 DATI GENERALI
 VALUTAZIONE PAZIENTE
 DIARI
 ESAMI/VISITE
 INTERVENTI
 FARMACOTERAPIA
 PARAMETRI
 ATTIVITA'
 PROGETTO RIABILITATIVO

Safety Strategy – Barcode Check - RFID



- Blood Transfusion Process



- Vital Parameters Detection



- Medical Devices tracking



- Surgical Instruments tracking



CLOSED LOOP MEDICATION AND PATIENT SAFETY STRATEGY AT VIMERCATE HOSPITAL

GIOVANNI DELGROSSI - CIO