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Introduction to HIMSS...

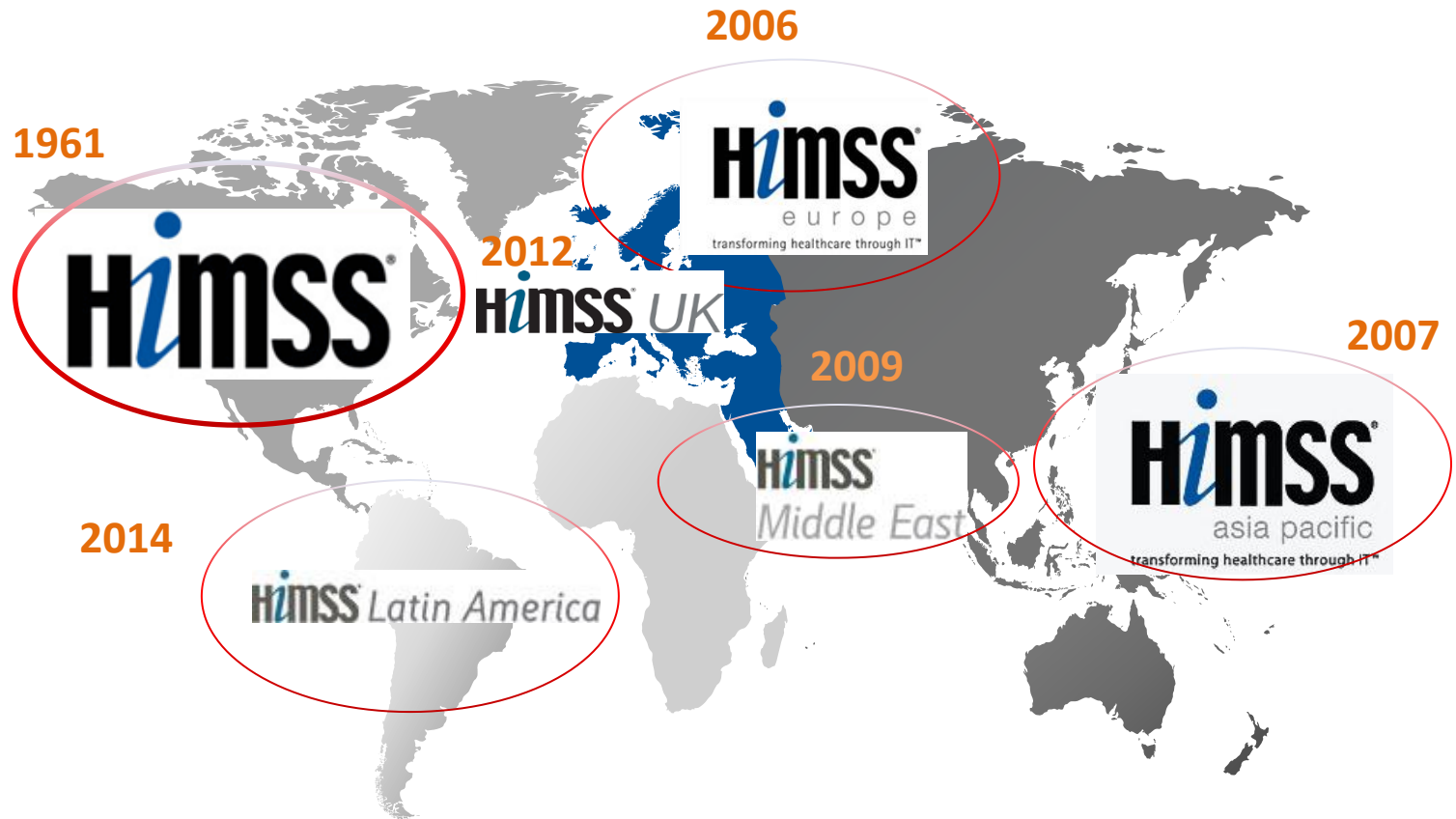
The EMRAM explained...

HIMSS

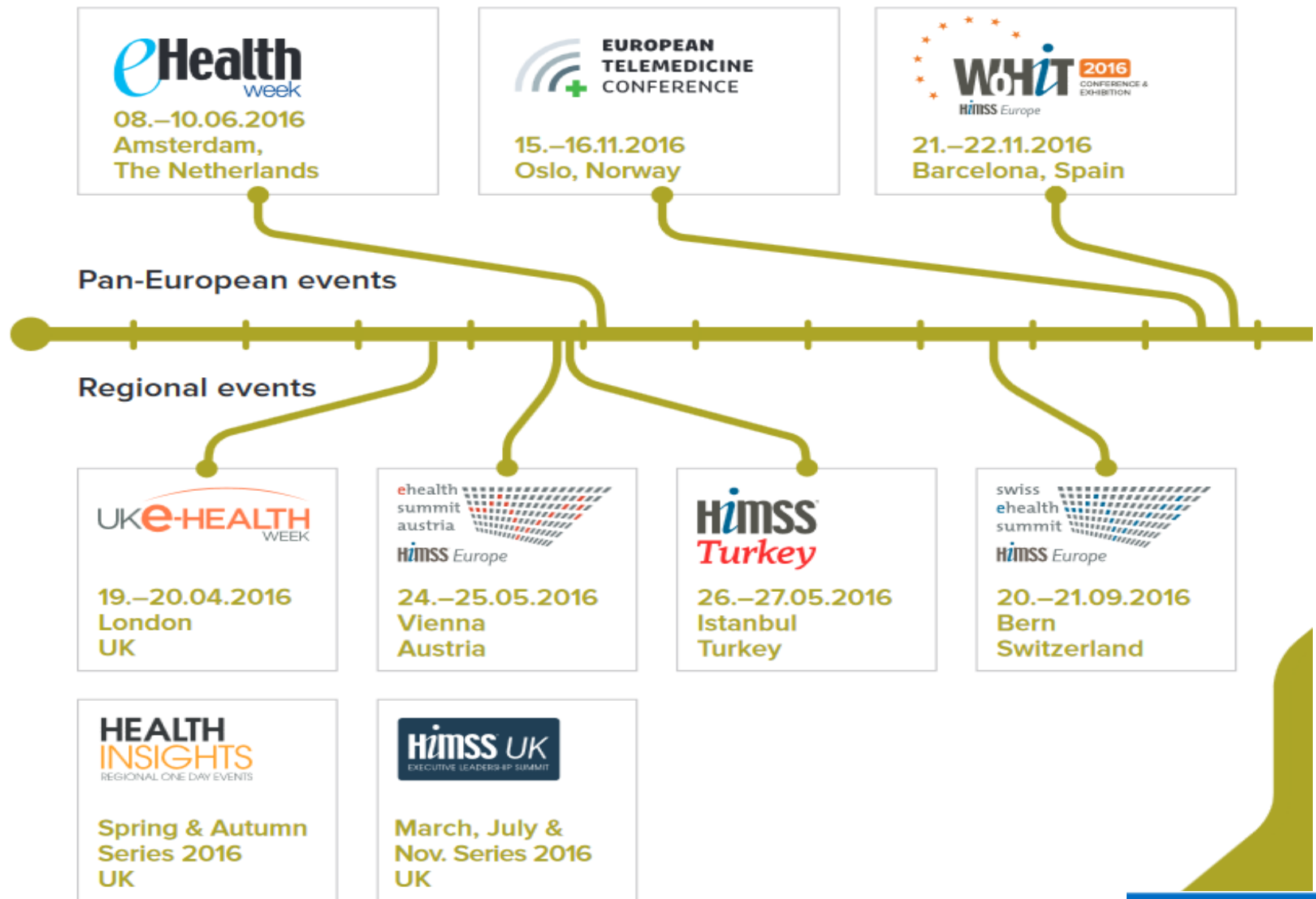
HIMSS Vision

- Improve health through the better use of technology and information.

Global presence and influence..



EVENTS IN 2016



MEDIA – EUROPEAN HEALTH IT NEWS AND VIEWS

HEALTH **IT** CENTRAL
HIMSS Europe

WWW.HITCENTRAL.EU

Insights
HIMSS Europe

The quarterly IT journal for healthcare leaders across Europe – in print & online

British Journal of
Healthcare Computing®
HIMSS Europe

The positive voice of healthcare IT in the UK – available online

HealthTech Wire®
HIMSS Europe

The eHealth business news channel online – both in English and in German

“As a decision maker, HIMSS Insights provides an excellent understanding of industry best practices and trends that take place throughout Europe.”

Vicent Moncho Mas, CIO, Hospital de Denia Marina Salud. Spain

HIMSS Analytics



All HIMSS websites:

40,000
visitors/month

all combined

HIMSS media products:

15,000
readers/month

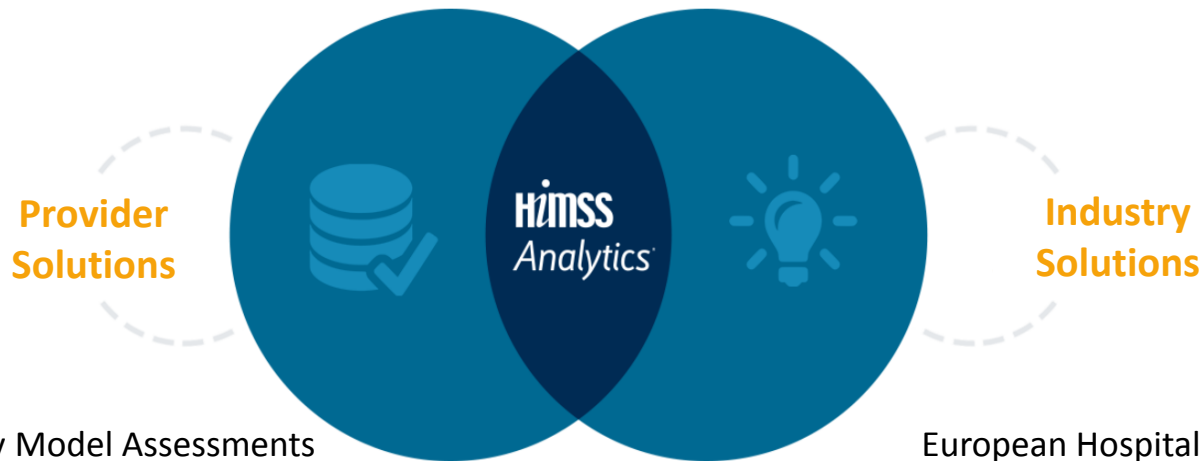
across Europe



forum
eHealth

ANALYTICS

Uniquely positioned
at the intersection of **data** and **insight**



Maturity Model Assessments
Stage 6/7 Validations and Mock Visits
Best Practice Hospital Excursions
IT Implementation and Benefits
Realization Consulting
Certified Educator Programme

European Hospital Database
Proprietary Market Research
Maturity Model Consulting
Market Reports and Executive Briefings
Certified Educator Programme

We have data
from

2,000+
European
hospitals

EMRAM Stage 6
Award

60+
European
hospitals

EMRAM Stage 7
Award

3
European
hospitals

Data collection, analysis and reporting..

- HIMSS Collects hospital data worldwide
 - 6,000 hospitals in USA & Canada
 - 2,000 hospitals in Europe
 - Plus Asia, ME, Australia, New Zealand, Canada, and others
- Information on:
 - EMRAM requirements
 - Demographics
 - Finance
 - Vendors
 - Usage of IT

The EMR Adoption Model

- Acute care EMRAM is 11 years old
- Small changes periodically to Stage 7 criteria
- Launching significant changes in 2018.
- Make changes to lower stages to raise the bar
- Coincide with significant changes to HA software tool that supports data gathering and scoring

The EMRAM Value Proposition...

- Only internationally recognised evidence-based model of its kind.
- Provides roadmap on how to progress towards a paperless EMR environment.
- Informs current status and possible future directions by neutral organisation.
- Global benchmarking tool.
- Reflects the way many hospitals build their capability.

The EMRAM Value Proposition...

- Lower premiums for high scoring hospitals
- Greater patient safety
- Increase in the quality of clinical care
- Fewer cases of medical error
- Fewer medicine related incidents
- Recognised by JCI
- Used for reference site visits
- Outward sign that the hospital recognises the importance of IT enabled change

THE EMR ADOPTION MODEL

... in 7 Stages to Highest Quality in Patient Care

EMR Adoption Model SM	
Stage	Cumulative Capabilities
Stage 7	Complete EMR integrates all clinical areas (e.g. ICU, ED, Outpatient) displacing all (medical) paper records in the hospital; Continuity of Care standards to exchange data; Data Warehouse used as basis for clinical and business analytics
Stage 6	Clinical Documentation interacts with advanced Decision Support (based on discrete data elements) AND Closed Loop Medication Administration
Stage 5	Integrated Image Management Solution (e.g. PACS) displaces all film-based images throughout the hospital
Stage 4	Electronic Ordering provides Clinical Decision Support (based on rules engines) in at least one clinical service area and for medication
Stage 3	Clinical Documentation as well as Electronic Ordering of Physician and/or Nursing Care services; includes tracking of Medication Administration (eMAR)
Stage 2	Clinical Data Repository / Electronic Patient Record allows collection and normalization of data from disparate clinical sources throughout the hospital
Stage 1	Information Systems for major ancillary departments (Laboratory, Radiology, Pharmacy) are installed or data output from external service providers are processed electronically
Stage 0	Information Systems for major ancillary departments (Laboratory, Radiology, Pharmacy) are not installed or data output from external service providers cannot be processed electronically

“Paperless” patient record environment
for **highest quality** of care,
data continuity & full HIE



Full electronic clinical decision support, **and**
highest medication safety



Completely electronic diagnostic image
management



Electronic order entry with decision
support and result reporting



Clinical ordering and documentation –
especially nursing care



A patient-centered electronic data
repository



Electronic diagnostic and pharmacy
department information

The EMR Adoption Model

- Stages used to indicate increasing levels of clinical computing sophistication
- All the criteria of one stage must be met to “earn” that stage
- One world-wide global standard, no variation by region or continent
- Centrally managed with regional input
- Focuses more on functions accomplished through e-health and less on description of technology itself
- Focuses on the workflow implications as well as what technology is installed

PJ Salaman FRCS....

- “I need technology to make it easy for me to do the right thing – and difficult for me to do the wrong thing”



It is easier to do the wrong thing
without technology...



An easy mistake to make!!



And easy to do the right thing....

Cyclobenzaprine is a muscle relaxant used to treat spasm and skeletal pain



Cyproheptadine is an antihistamine used to treat allergic reactions

Making the news...



The three enablers....

MONEY

Is there a willingness to invest?

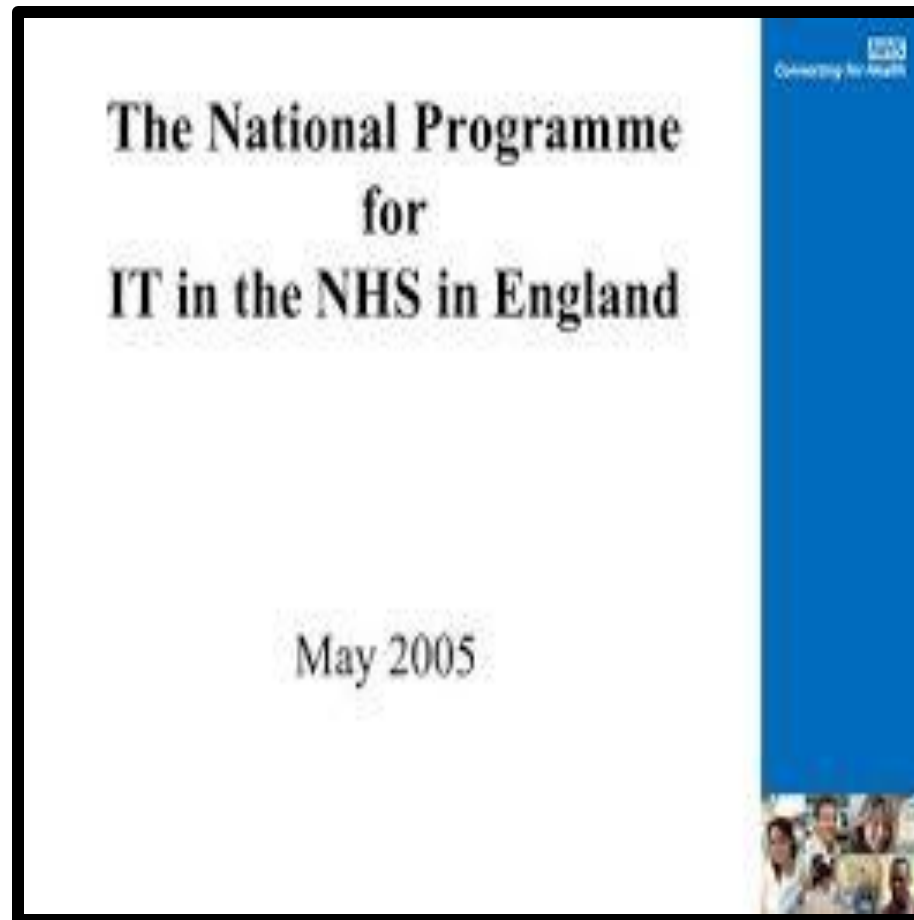
CLINICAL ENGAGEMENT

Are clinicians involved at all levels?

LEADERSHIP

Where are the leaders and are they strong enough?

12 Billion pounds...



EMR Adoption ModelSM (2006-2015)

United States

Stage	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Stage 7	0.0%	0.0%	0.3%	0.7%	1.0%	1.2%	1.9%	2.9%	3.6%	4.2%
Stage 6	0.1%	0.8%	0.5%	1.6%	3.2%	5.2%	8.2%	12.5%	17.9%	27.1%
Stage 5	0.5%	1.4%	2.5%	3.8%	4.5%	8.4%	14.0%	22.0%	32.8%	35.9%
Stage 4	3.1%	2.2%	2.5%	7.4%	10.5%	13.2%	14.2%	15.5%	14.0%	10.1%
Stage 3	18.7%	25.1%	35.7%	50.9%	49.0%	44.9%	38.3%	30.3%	21.0%	16.4%
Stage 2	40.0%	37.2%	31.4%	16.9%	14.6%	12.4%	10.7%	7.6%	5.1%	2.6%
Stage 1	17.4%	14.0%	11.5%	7.2%	7.1%	5.7%	4.3%	3.3%	2.0%	1.7%
Stage 0	20.4%	19.3%	15.6%	11.5%	10.1%	9.0%	8.4%	5.8%	3.7%	2.1%

N = 4,237

N = 5,073

N = 5,166

N = 5,281

N = 5,337

N = 5,458

N = 5,458

N = 5,449

N = 5,467

N = 5,460

Ministerial Guidance...



- All hospitals completed an EMRAM survey in 2015
- Many hospitals quickly improved
- The relationship continues

A Leader in every seat...



Focus on the acute EMRAM..SM



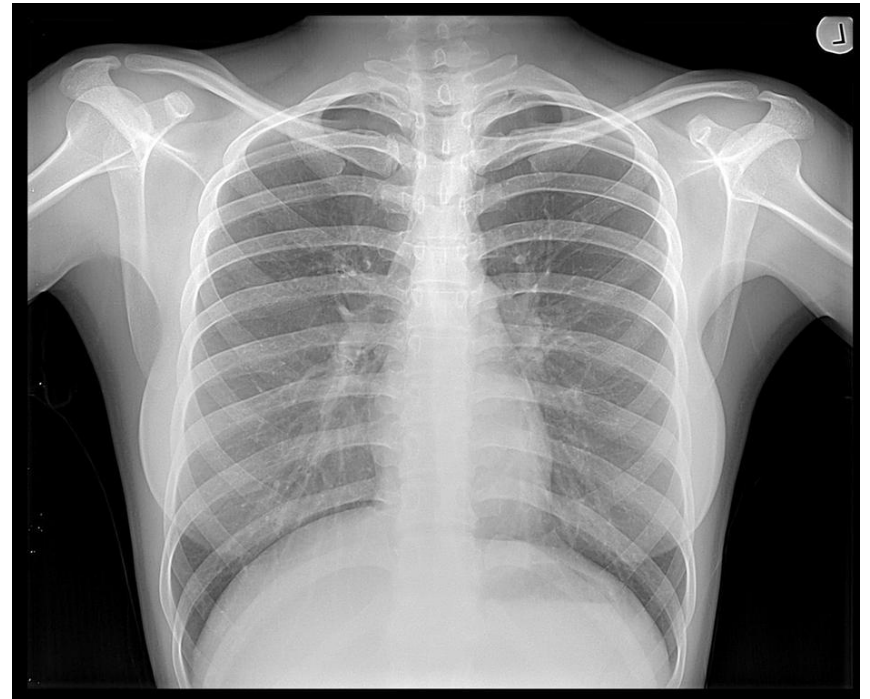
The EMRAM Stages.....

Stage	Cumulative Capabilities
Stage 7	Complete EMR, CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP
Stage 6	Closed loop medication administration
Stage 5	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS
Stage 4	CPOE, Clinical Decision Support (clinical protocols)
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed
Stage 0	All Three Ancillaries Not Installed

**... 7 Stages
that lead to
Highest Quality
in Patient Care**

Stage 1..

- Pathology system
- Radiology system
- Pharmacy system
 - Drug to drug
 - Allergy checks



Stage 2...

- Single Data Repository (CDS)
- Basic Clinical Decision Support (CDS)
 - Duplicate tests
 - Conflict checking



Stage 3..

- Electronic documentation
 - Nursing orders
 - Vital signs
 - Progress notes
- Risk assessments and care plans



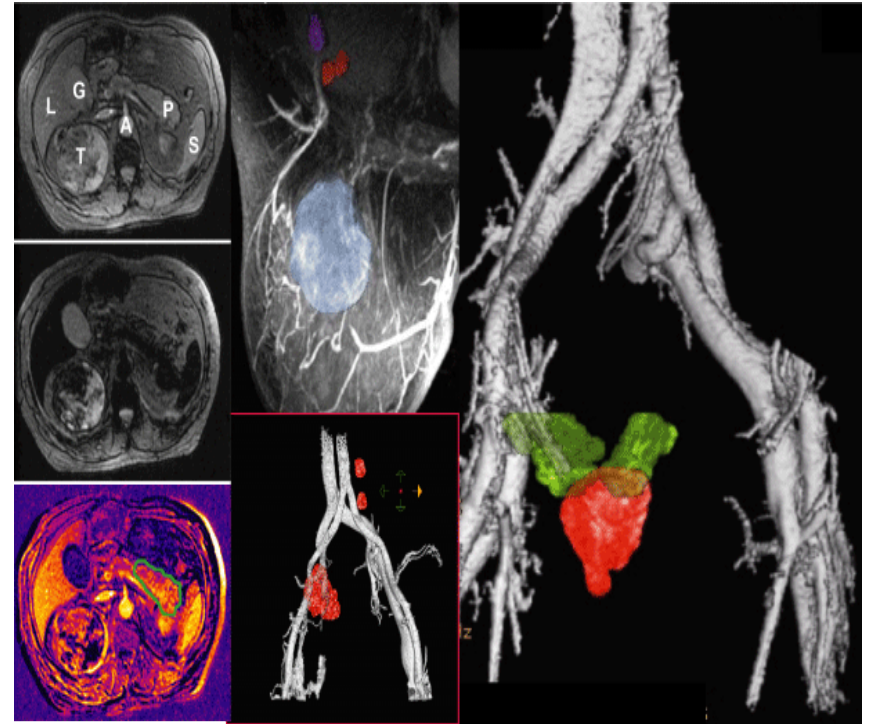
Stage 4...

- Order Communications
 - Pathology
 - Imaging
 - Prescribing
 - Therapy assessments
- Alerts and warnings
 - Drug to drug
 - Allergy
 - Drug to Lab value
 - Duplicates



Stage 5...

- Full Picture and Archiving Communication System (PACS)



Stage 6...

- Closed Loop Medicines Administration (CLMA)
- Full CDS
- Physician documentation
- EDMS optional



CLMA...

- **Step 1:** Physician enters order via CPOE
 - NOTE: Stage 7, $\geq 90\%$ of all orders via CPOE for ≥ 4 months
- **Step 2:** Pharmacist (or other qualified & authorised professional, e.g., senior physician) verifies the order in system
- **Step 3:** Pharmacy dispenses bar coded medication
 - At the bedside ($\geq 95\%$ of pts/meds scanned for ≥ 4 months)
- Step 4: Nurse scans patient
- Step 5: Nurse scans medication
- Step 6: System verifies '5 Rights' – Patient, Medication, Route, Dose, Time – with alerts
- Step 7: Nurse administers medication
- Step 8: Nurse verifies/document administration in EMR

Patients own medicines...

MIDTOWN PARK PHARMACY
Phone: DA3-4907 or DA3-4908 FAIRVIEW, TEXAS
910 MAIN STREET

For Mrs. J. Paris
Address 126 Creek

R Stilbestrol 25mg
(milenal)

Sig: 194h for 8 days
then 1g2

Reg. No. B Lamin #15926 N11
Date 7/17/15 Address _____

REPT BY DIST 1 2 3 4 TIMEB P R N ☐ NON-RES ☐

**ALWAYS
BRING **YOUR**
MEDICINES
INTO HOSPITAL
WITH YOU.**

This enables:

- Our staff to know what medicines you use
- You to stay in control of your medicines
- The NHS to reduce waste of medicines



Stage 7...

- Have at least 12 months of data
- Data driven organisation
- Uses data to enable transformation
- Essentially paperless
- View technology as critical



Profile of a stage 7 hospital...

- Use data to drive improved outcomes related to ...
 - Process, Financial, Clinical, Quality & Safety
- Are paperless, or near paperless (create no paper)
 - All clinically relevant data is in the EMR
- Are fully committed to continuous process improvement through collaboration
 - Strong IT leadership and executive champions
 - Clinician / end-user champions

EMRAM Stage 6 / 7 Awards

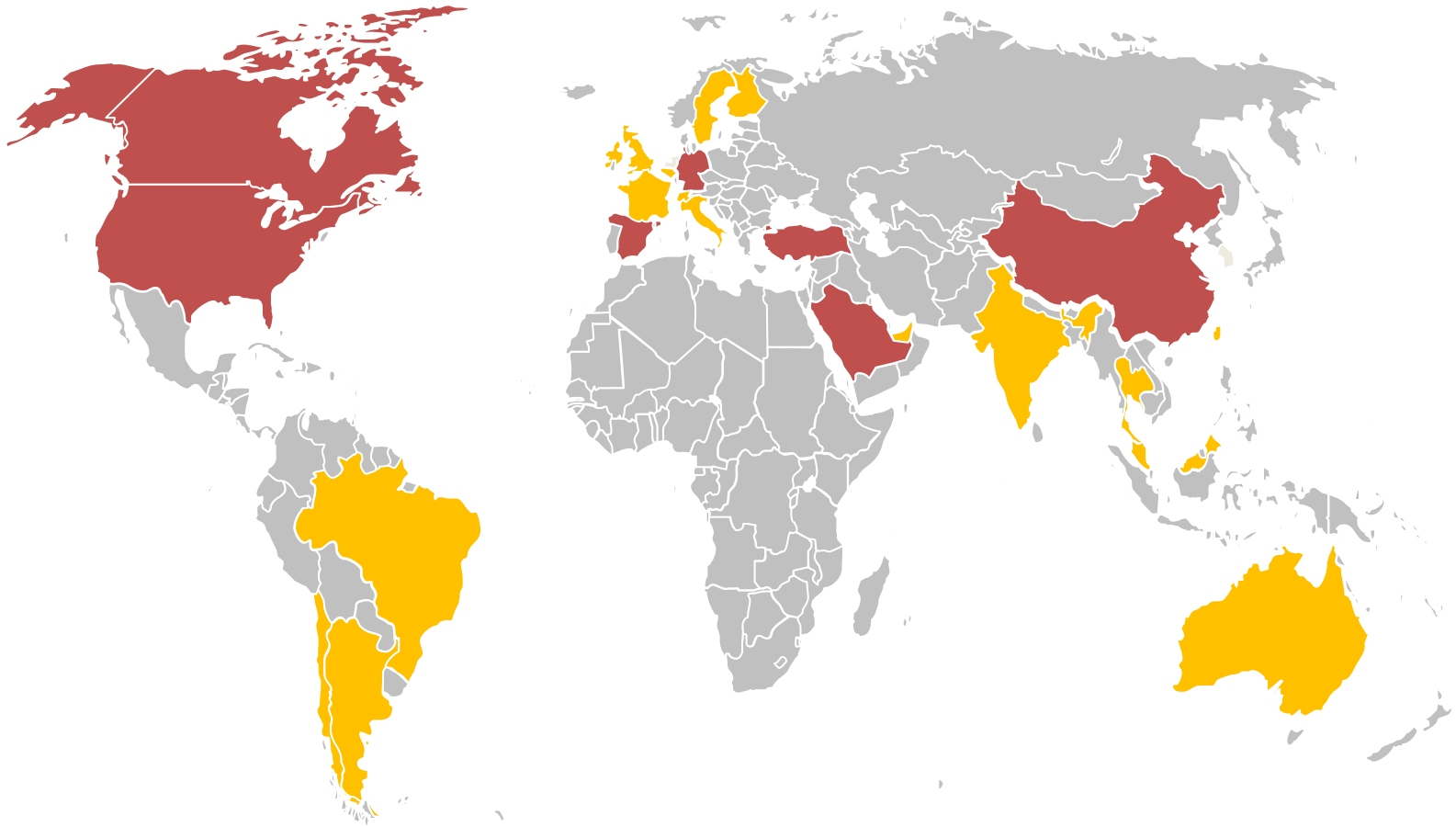
STAGE **6&7**

Belgium	3
France	1
Germany	1
Portugal	1
Ireland	1
Italy	4
Netherlands	7
Spain	9
Switzerland	1
Turkey	18
United Kingdom	3
TOTAL:	48

(data 01/01/2017)



■ Canada, China, Germany, South Korea, Spain, Saudi Arabia, The Netherlands, Turkey, USA



■ Argentina, Australia, Belgium, Brazil, Canada, Chile, China, Denmark, Finland, France, India, Ireland, Italy, Malaysia, Saudi Arabia, Singapore, Switzerland, Taiwan, Thailand, The Netherlands, Turkey, UAE, UK, USA

The Process....

- Data collection
- Quality assurance
- Gap analysis
- EMRAM score
- Next steps



The Online Survey.....

[EMRAM PDF](#)

Validation process....



Validation process...

Stage 6 validation

- Hospital must submit requested data to be scored
- Data undergo quality review process for completeness
- When completed, EMRAM score is calculated and basic gap assessment report provided [Gap Analysis](#)
- If scored at 6, hospital must undergo an on-site validation before Stage 6 is granted
- Must be validated at Stage 6 to be eligible for Stage 7
- Stage 6 validation
 - On-site; focused on criteria only through Stage 6
 - One reviewer from HIMSS Analytics
 - Decision is made at end of visit with written report sent within two weeks of visit

Validation process...

Stage 7 validation

- On-site visit to review all criteria through Stage 7
- Three reviewers
 - HA Inspector
 - CIO from another stage 7 hospital (or Stage 6 hospital if Stage 7 CIO not available)
 - Physician from another stage 7 hospital (or Stage 6 hospital if Stage 7 CIO not available)
- Decision given at end of visit with final report sent within two weeks of visit
- HA recommends and provides on-site pre-validation consultations for both Stage 6 and Stage 7 preparations

Typical Stage 6 visit....

- 9am Presentation from senior management team
- 10am Observation on Med & Surgical wards
- 11am Observations on ICU
- 12am Observations in Pharmacy
- 2pm Observations in the Imaging department
- 3pm Observations in Medical records and coding
- 4pm Observations in A&E
- 5pm Discussion with senior management team
- 6pm Decision

Stage 7 Validation process....

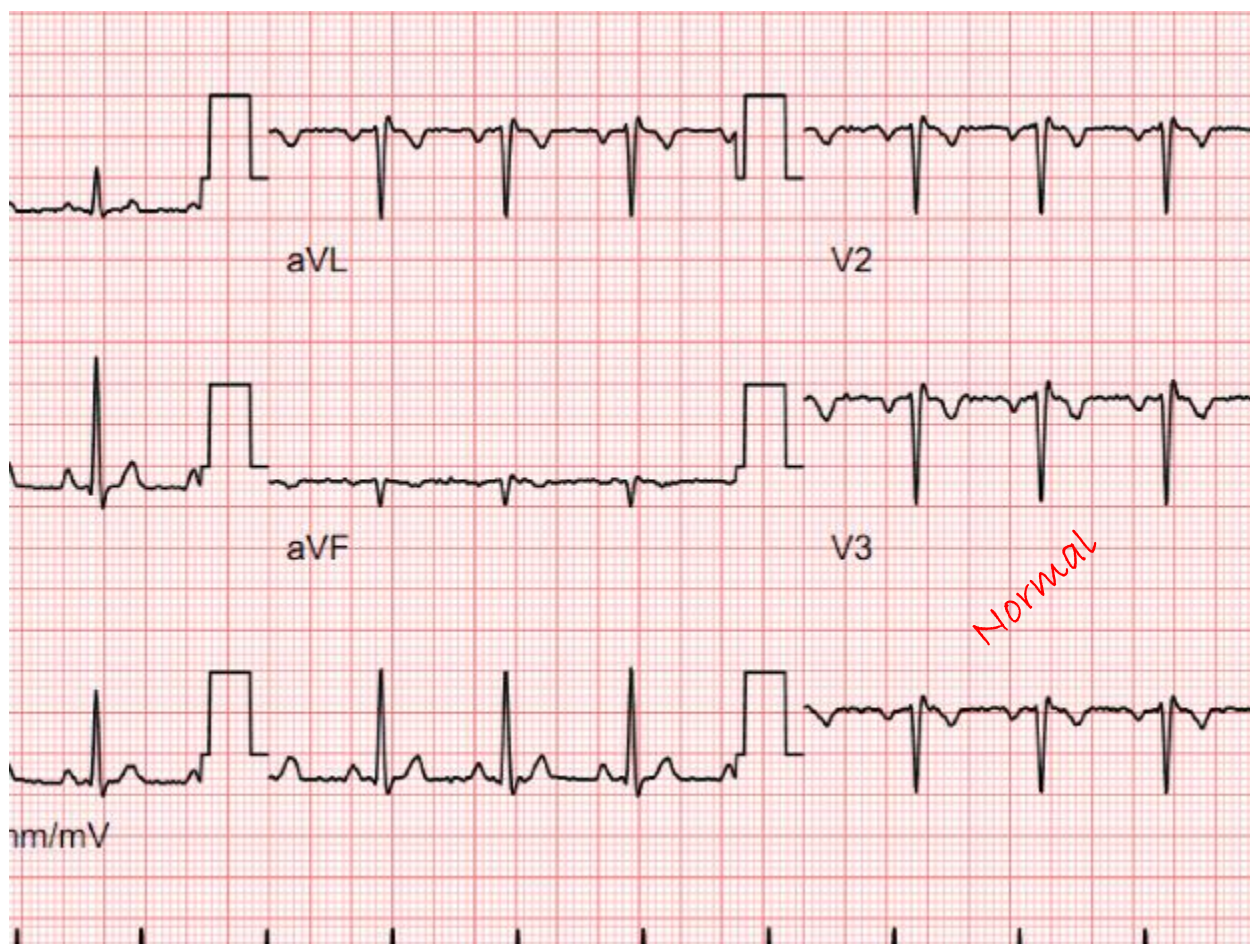
- System Overview & Pervasiveness of Use
- Governance
- Clinical & Business Intelligence
- Health Information Exchange
- Disaster Recovery & Business Continuity
- Privacy & Security

Validation is good for three (3) years; revalidation required to maintain Stage 6 or 7 status

Always an opportunity to learn..



Exhibits...



Exhibits...



dreamstime.com

Exhibits...



Exhibits...



Exhibits...



Exhibits...



Exhibits...



Exhibits...



Exhibits...



Voila !!



Thank You

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