E-health NSW:
Changing Patient Trajectories

CLINICAL
EXCELLENCE
COMMISSION

The Role of e-health in Supporting Patient Safety

Dr Peter Kennedy
Deputy Chief Executive Officer
Clinical Excellence Commission

28 February 2014
Whole of Hospital Program: Data Masterclass

EMR Background

Implemented in 142 hospitals (80% of bed base)

Key “modules” – FirstNet, SurgiNet, Orders, Results, Scheduling, Patient Management, Clinical Notes, D/C summaries

National leader (QLD built on NSW base), one of the largest eMR footprints in the world (on a daily basis – 23K users, 212K chart opens, 136K orders, 17K appointments)

NSW EMR Innovation – integration of

- State-wide Medical Imaging
- National Personally Controlled Electronic Health Record (PCEHR) links and
- Between The Flags functionality to monitor deteriorating patients

Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), Closed Loop Med Admin
Stage 5	Full Complement of Radiology 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

Data from HIMSS Analytics™ Database

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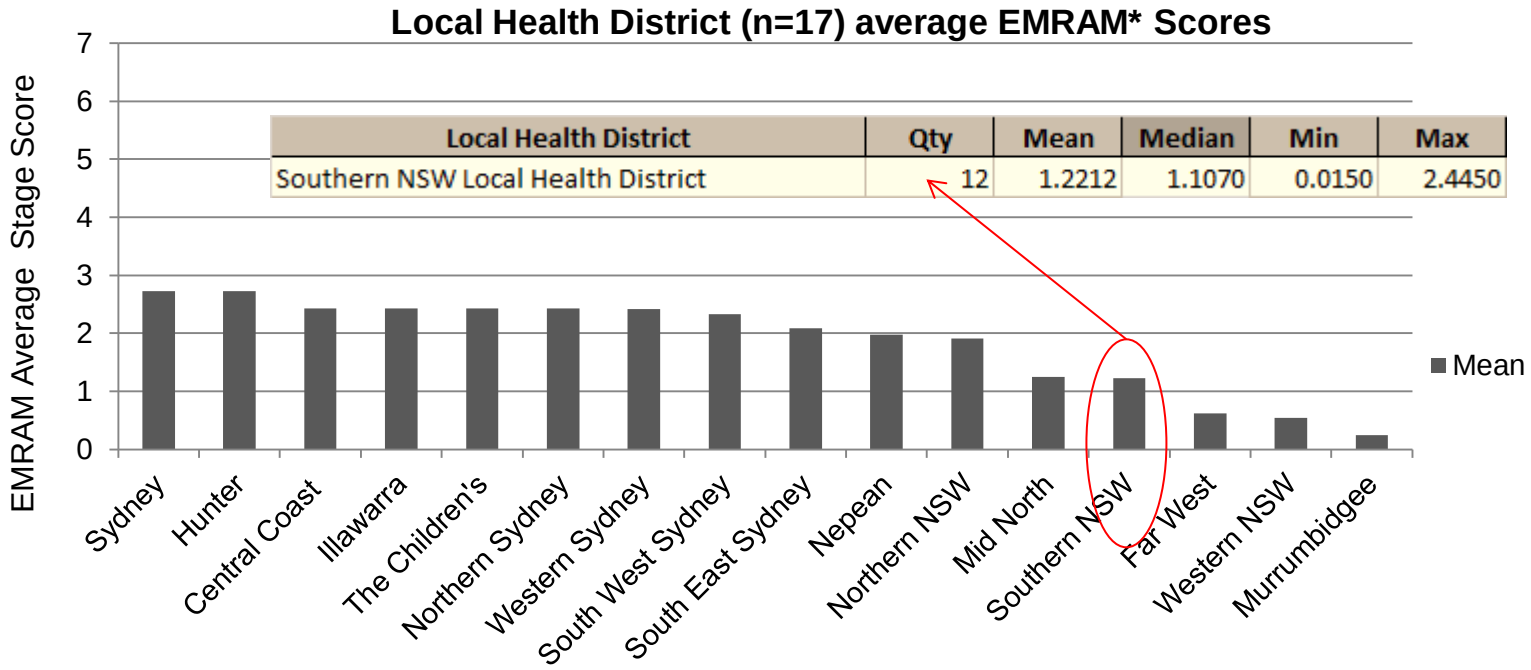
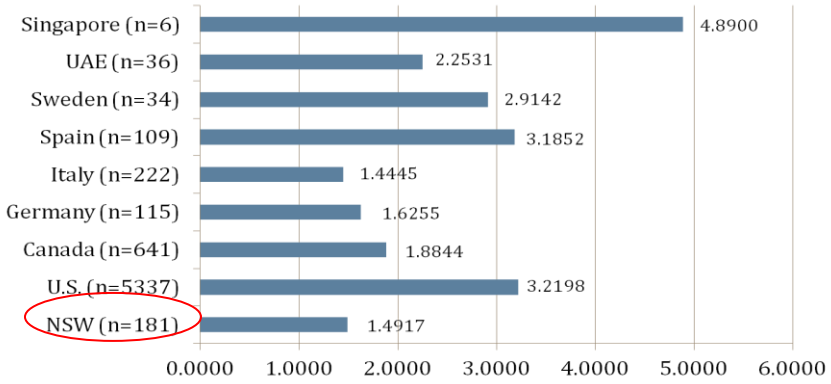
NSW GOVERNMENT | eHealth

Maturity





- **Overall low average (1.41)** comparable when very small / MPS sites excluded
- Goal **NOT to get all hospitals to Level 6, however** HIMMS assessed **40 hospitals** have fulfilled the majority of pre-requisites
- EMRAM is **acute care focused** – handover to and from Primary and Community Care important

^The Healthcare Information and Management Systems Society
*EMR Adoption Model

Electronic Medical Record

The most mature EMR in the country. Usage growing

~ 150 results viewed per minute

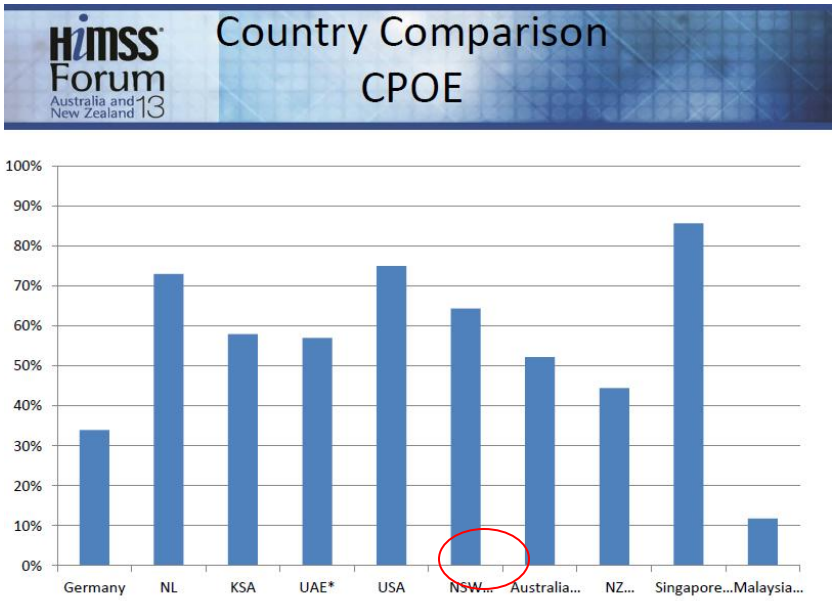
Jul-13						
Client	Average Daily Users - Total	Daily Average Appointments	Total Chart Opens	Daily Average Chart Opens	Total Orders (Opened)	Daily Average Orders (Opened)
Greater Southern Greater Western (GPROD)	1568.2	463	486,768	15,702	151,088	4,874
Mid North Coast Local Health District (NPROD)	2140.93	1,281	481,515	15,533	166,882	5,383
Northern Sydney Local Health District (NSPRD)	3818.73	1,789	1,061,282	34,235	332,419	10,723
South Eastern Sydney Local Health District (SEPRD)	4141.7	4,692	1,298,821	41,897	626,423	20,207
Sydney Children's Hospital Network (SCHNPROD)	842.7	820	175,390	5,658	55,186	1,780
Sydney Local Health District and South Western Sydney Local Health District (PROD)	7588.13	7,699	2,045,630	65,988	1,428,676	46,086
Western Sydney Local Health District (SWPRD)	3257.81	658	1,022,018	32,968	1,460,098	47,100
	23,358	**17,401**	**6,571,424**	**211,981**	**4,220,772**	**136,154**
TOTALS @ December 2010	15239	10827	4064682	131119	2432231	82122
% Increase	53%	61%	62%	62%	74%	66%

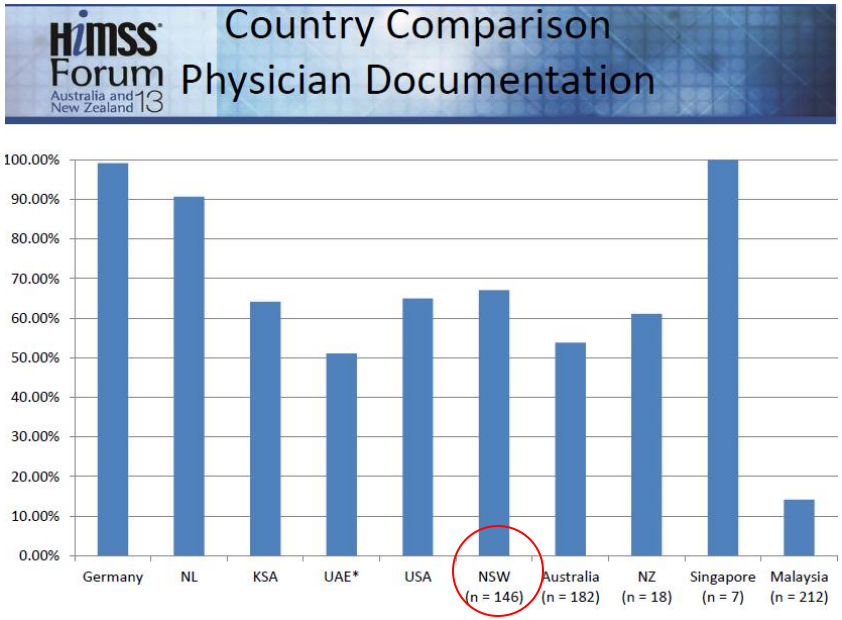
From December 2010 -

- 53% more users
- Daily appointments increased 61%
- Daily chart opens were up 62% across the state
- Daily orders were up 66% across the state

Maturity, Opportunities

- Favourable comparisons for Order Entry and Clinical Documentation
- Cerner and NSW Health have identified joint initiatives aimed at taking lead sites in the State, through and beyond electronic medications management (eMM) to HiMSS Stage 6 and ultimately, Stage 7.
- Sydney Local Health District (SLHD) and South Western Sydney Local Health District (SWSLHD) as well as the Sydney Children's Hosptial Network (SCHN) are positioned to be lead sites for these initiatives.



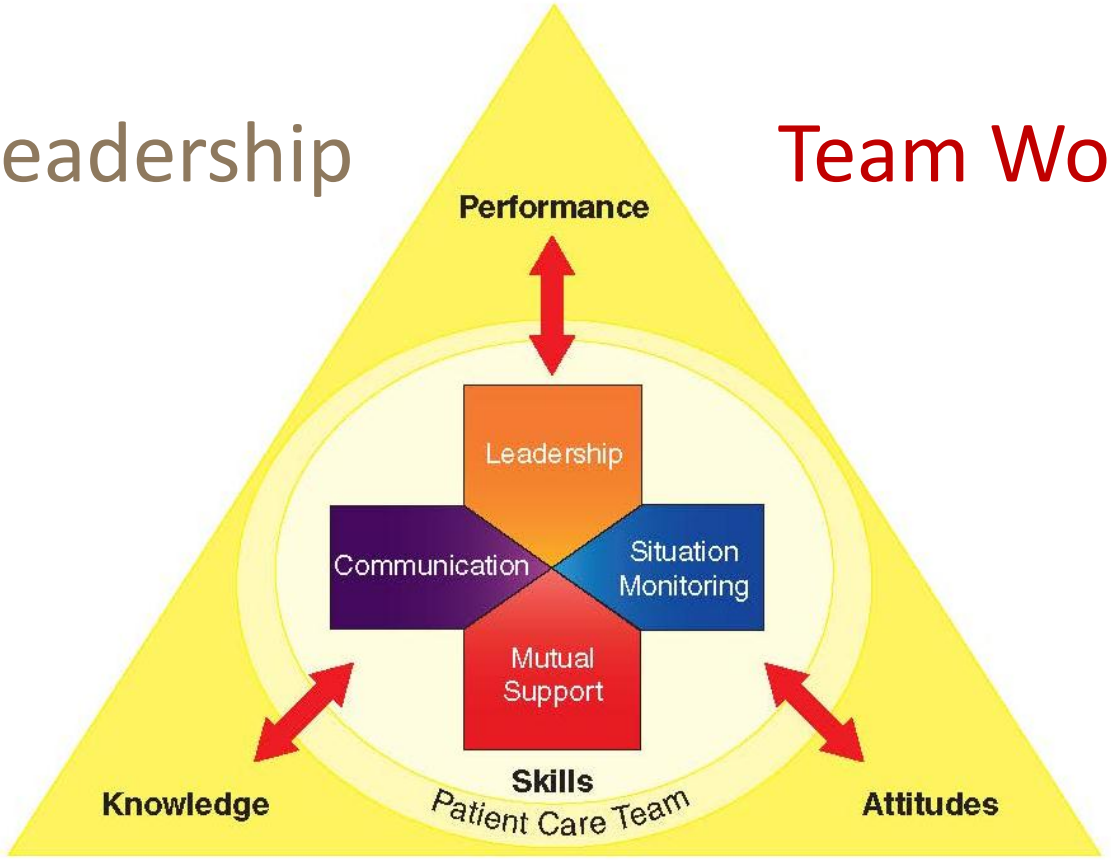


TeamSTEPPS

Communication

Leadership

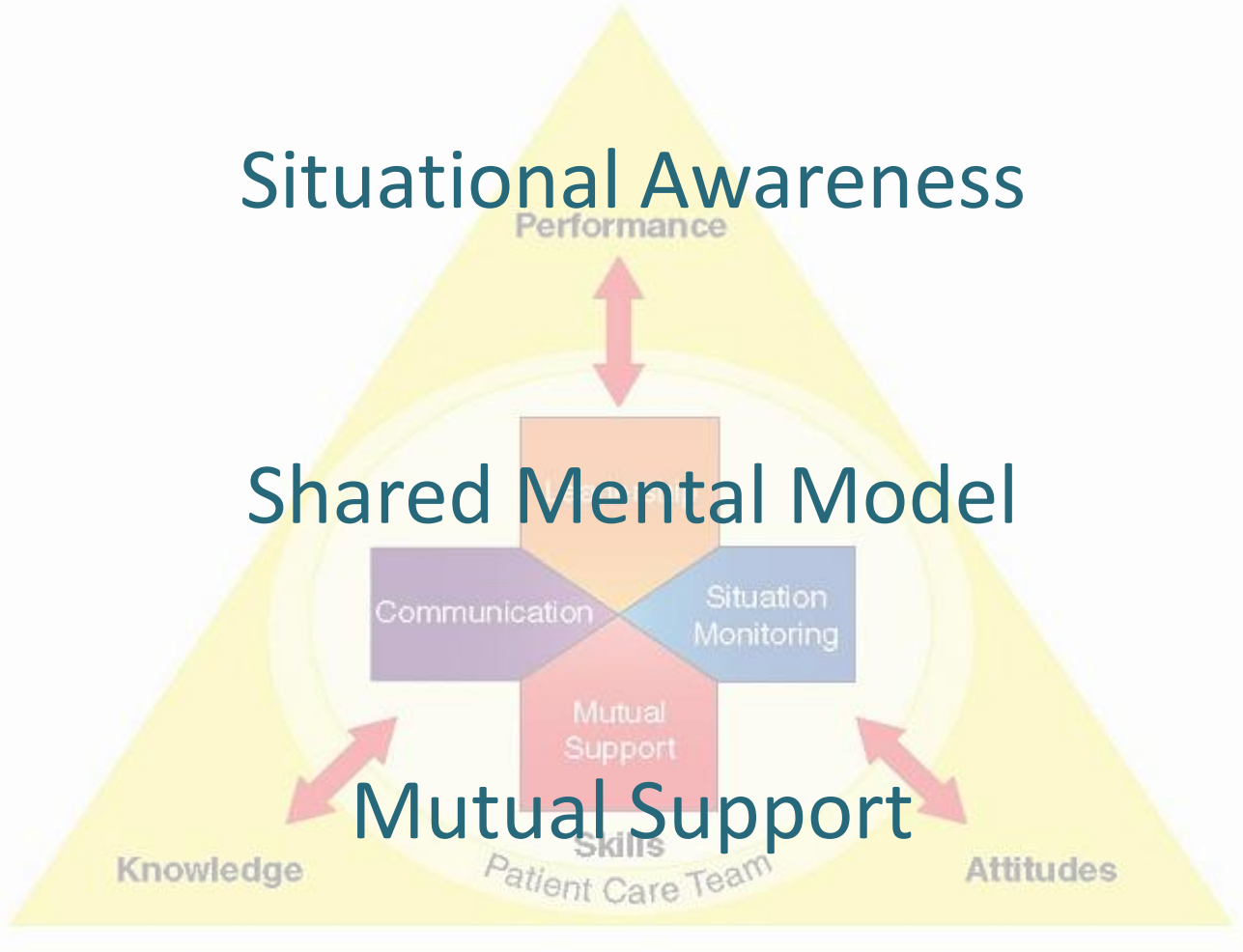
Team Work



Courtesy of the Agency for Healthcare Research and Quality

TeamSTEPPS

Situational Awareness



Shared Mental Model

Mutual Support

Patrick Lencioni

Principles for EMR Rollout

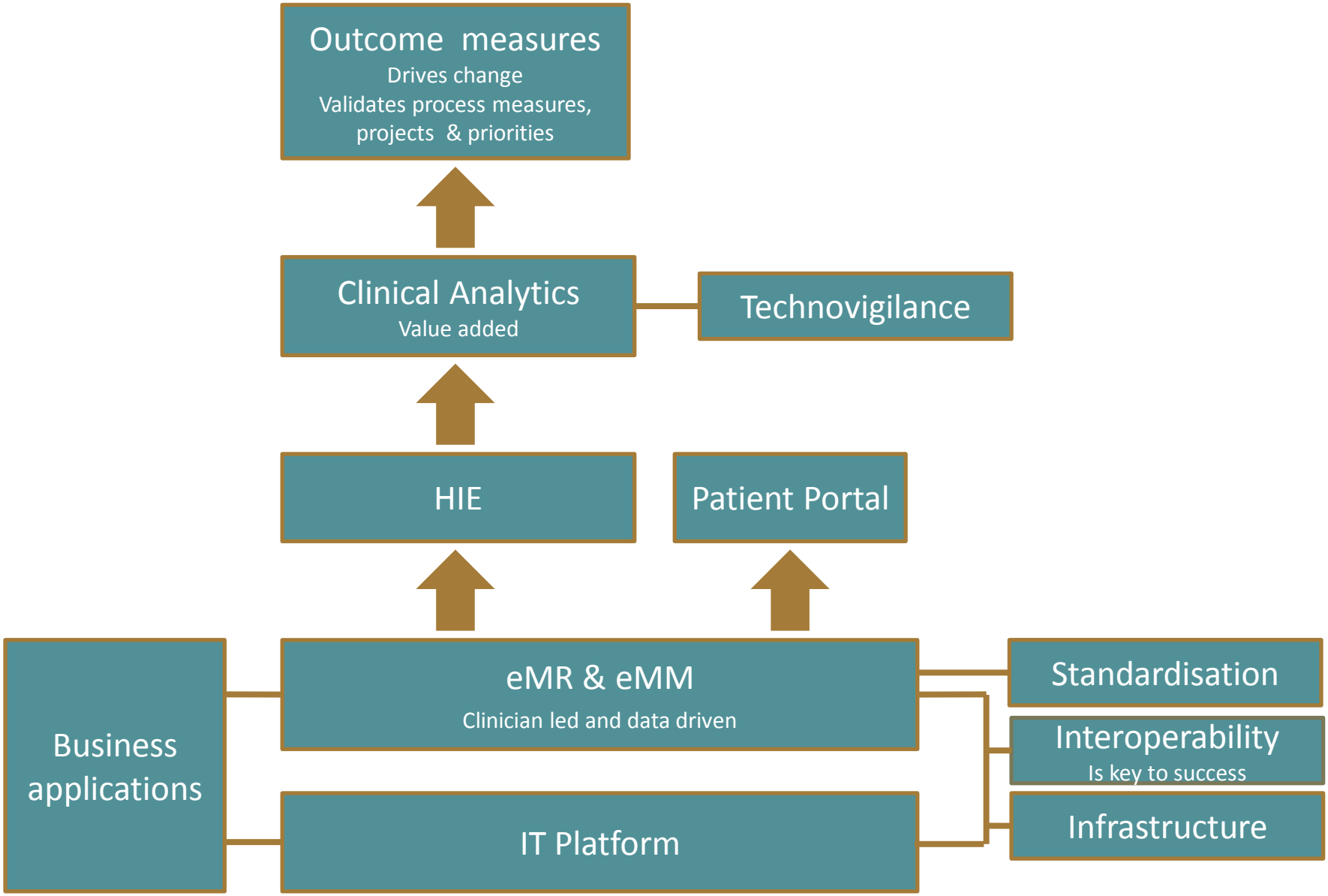
Executive Sponsorship

Clinical Leadership

Technical Expertise

Equity

	Risk Category	Owner
	Policy	Ministry
Enablers	Strategy and Architecture	eHealth NSW
Enablers	Governance	
Enablers	Central Infrastructure (Data Centres) and Operations (EMR)	
Enablers	Program Management, Procurement	
Change Management	Ownership	ACI / CEC / HETI / NSW Kids and Families
Change Management	Work Practice Review	
Change Management	Standardisation and Content Knowledge	
Change Management	Education	
Change Management	Local Project Management, Implementation and Training	Local Health Districts
Change Management	Clinician Support	
Change Management	Benefits Realisation	
Change Management	Local Networks / Bandwidth	
Change Management	End User Computing (PCs, Mobile Devices, TeleHealth Endpoints, Wireless Networks, Phones)	


Outcome measures
Drives change
Validates process measures, projects & priorities
Clinical Analytics
Value added
Technovigilance
HIE
Patient Portal
Business applications
eMR & eMM
Clinician led and data driven
IT Platform
Standardisation
Interoperability
Is key to success
Infrastructure

Key Themes for EMR Rollout

It has to work for both Clinicians and Patients in improving patient care and safety.

Key Themes for EMR Rollout

Key Themes:

I. It is an opportunity to look at work practices and clinical practice

II. Will require increasing standardisation of care

III. Will provide opportunities for much better information on what we do and also in terms of outcomes

Key Themes for EMR Rollout

Key Issues:

I. The Firewall and moving information between hospitals, General Practitioners and patients

II. Use of own devices

III. Standardisation

IV. Evaluation

Key Themes for EMR Rollout

Key to Successful Implementation of Programs:

I. Training and education at facility level

II. Ongoing support at each facility

III. Adequate infrastructure at the facility level – devices, wireless network, speech recognition etc.

Quality in the EMR

We need to define with each project what are the quality parameters that we want to achieve from the implementation. We need to build them into the development process.

Quality cannot be an afterthought,

it must be a driver.

Memorial Hermann Hospital

Houston Texas

Won the Eisenberg Prize for quality in the US with their Boardroom to Bedside Program.

Memorial Hermann Hospital

Houston Texas

Use their IT system to drive safety, quality, efficiency and effectiveness through:

I. Work practice review

II. Standardisation of care

III. Focusing on the patient

IV. Clinical analytical data that could both drive the change and reflect the change

V. Recognition of high performance

How the CEC is viewing the EMR rollout in NSW

Between the Flags

Sepsis Kills

Clinical Practice Guidelines for Paediatric Emergency Care

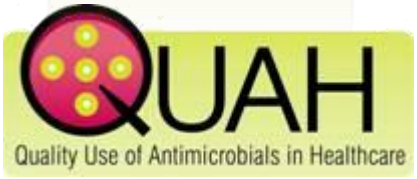
Falls

EMM

Antimicrobial Stewardship

High Risk Medicines

Medication Reconcilliation



Executive Buy-In

IT is going to be introduced in to the performance review process for all LHDs and LHNs in NSW. This means there will be key performance indicators and regular review of progress at the 3 monthly meetings.

Enterprise Data Warehouses

I. To maximise the benefits of EMR we need to be able to extract data and turn it into useful information for both managers and clinicians.

II. We need to have effective clinical analytic systems to look at what is happening with the EMR.

III. We need to link databases into the EMR system so that we can drive practice change.