

Critical Success Factors for Digital Hospital Transformation

Queensland Clinical Senate

Friday 5 August 2016

Richard Royle

Acting CEO - Australian Digital Health Agency

Relevant Experience

- Implemented Australia's first fully integrated digital hospital – St Stephens Hervey Bay – opened October 2014
- Chaired a review of the Personally Controlled Electronic Health Record for the Federal Government – December 2013
- Oversaw the closure of NEHTA and the opening of the new Australian Digital Health Agency – July 2016.

St Stephens Hospital, Hervey Bay

- Greenfield build, 100 bed private hospital – 5 operating theatres
- Fully integrated digital health hospital, utilising 29 Cerner Millennium applications, including a closed loop electronic medication system
- All clinical and non-clinical services integrated through the Cerner Millennium EMR
- Only 5 clinical interfaces – Medical Imaging, Pathology and Pharmacy.

St Stephens Hospital, Hervey Bay

July
2010

- Federal Government sought submissions via Health and Hospitals Fund for projects to improve access to regional and rural health services

May
2011

- Government announced \$47.1M grant to UCH towards developing Australia's first fully integrated digital hospital
 - \$25.9M towards construction costs
 - \$21.2M for eHealth

June
2012

- Contract signed with Federal Government

July
2012

- Project Director for eHealth appointed – Connie Harmsen
- Australia's first CMIO appointed – Dr Monica Trujillo

13
October
2014

- St Stephen's Hospital Hervey Bay takes its first patient

December
2014

- St Stephen's hospital is the first in Australia to achieve HIMSS Level 6

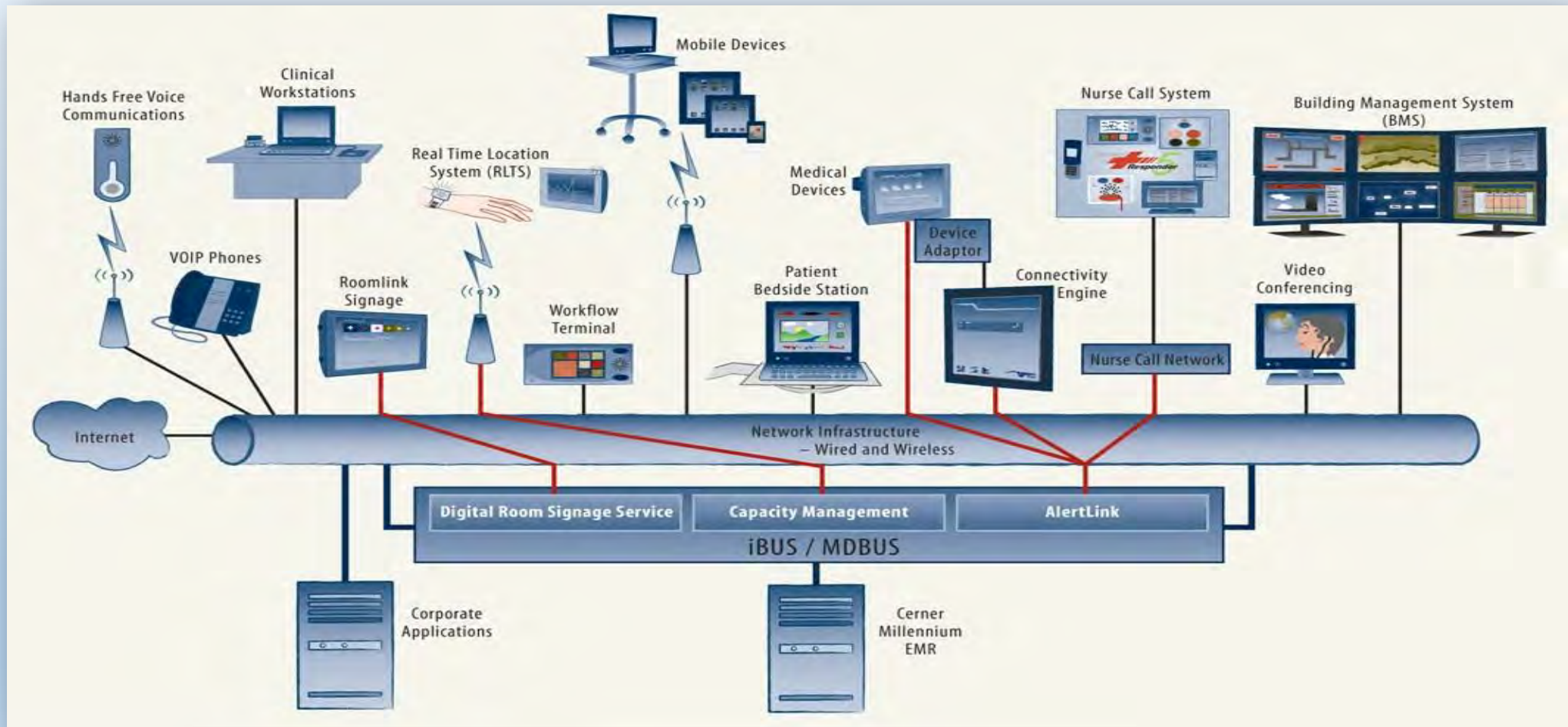
Key Learnings from Early Visits to US Fully Digital Hospitals

Richard Royle & Neal Patterson October 2012



- Treat project as a change management piece, not an IT installation
- Develop a close working relationship with your IT vendor - in our case Cerner
- Engage with your Doctors upfront and involve them in the detailed design of the system
- Employ project personnel with a thorough knowledge of full EMR implementation
- Focus strongly on staff education pre go-live and educated IT support on the ground post go live

St. Stephens Hospital Hervey Bay – Digital components



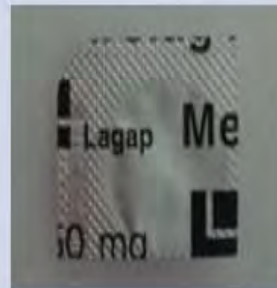
St. Stephens Hospital Hervey Bay – Patient room



- Unit dose packaging

Before

Blister packs



After



Paracetamol Cumulative Maximum Dose Alert

by Cerner, RN

Options Help

[Dashboard](#)
[Quality Measures](#)
[Multi-Patient Task List](#)
[Up to date](#)
[UCH Portal](#)
[Launch Wesley Intranet](#)
[Chart Request](#)

[Message Sender](#)
[AdHoc](#)
[Medication Administration](#)
[Depart](#)
[Communicate](#)
[Patient Education](#)
[Medical Record Request](#)
[Patient Pharmacy](#)

Discern: Funding Source : - BOLAND, Mrs med hx (1 of 1)

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Cerner

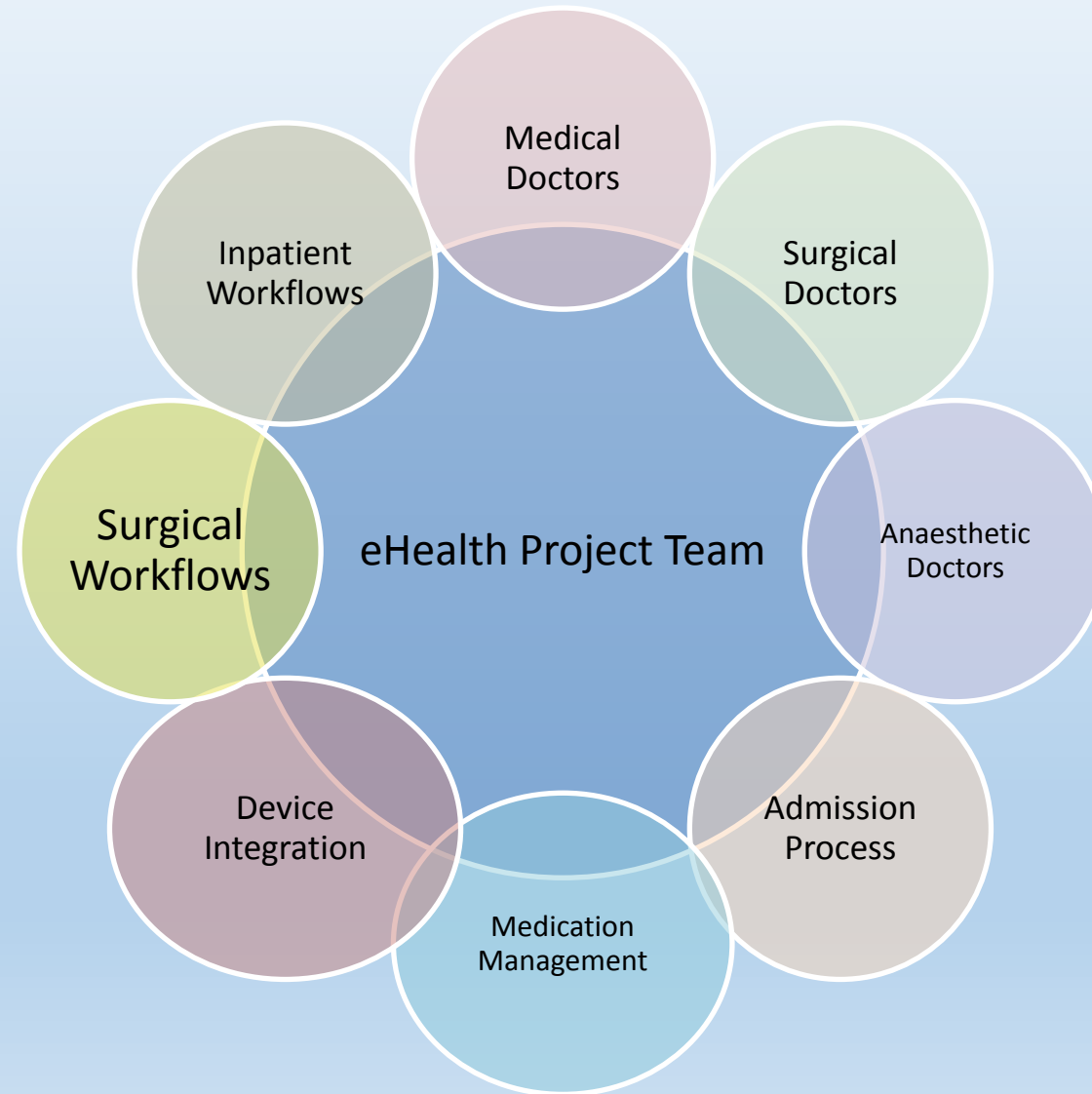
Dose Verification

The 24hr Paracetamol dose will be 5000 mg (including this administration), which exceeds the maximum daily dose of 4000 mg.

OK

| | 29/01/2014 4 11:31 | 29/01/2014 4 11:29 | 29/01/2014 4 10:32 | 29/01/2014 4 10:31 | 29/01/2014 4 10:29 |
|---|--------------------|--------------------|-------------------------|---|--------------------|
| paracetamol (paracetamol 500 mg oral... 2 tab(s), PO, Form: tab, QID, First Dose: 29/01/14 12:00:00 Max of 4g of paracetamol containing products i... paracetamol | 2 tab(s) | 2 tab(s) | 2 tab(s) | 2 tab(s) | |
| Numeric Rating at Rest | | | | | |
| Temperature - Tympanic | | | | | |
| Medication Administration Follow Up | | | | | |
| PRN | | | | | |
| paracetamol-codeine (Panadeine 500 m... 2 tab(s), PO, Form: tab, 2 minutely, PRN for Pain, First Dose: 29/01/14 10:27:00 Maximum of 4g of paracetamol containing prod... codeine-paracetamol | | | administratiministratio | 2 tab(s) Last given: 29/01/2014 10:32 | |
| Medication Administration Follow Up | | | | * 2 tab(s) Au * 2 tab(s) Au * 2 tab(s) Au | |
| | | | | Auth (Verify | |

Clinical Transformation and Work Redesign Teams



Redesign UCH Team Composition

62 Staff

- 15 St Stephen's Hospital
- 8 The Wesley Hospital
- 8 St Andrew's War Memorial Hospital
- 2 The Sunshine Coast Private Hospital
- 29 UCH corporate (pharmacists, quality, eHealth, ISD)

27 Doctors

- 7 St Stephens
- 4 St Andrews
- 9 Wesley
- 5 Sunshine Coast
- 2 corporate

Guiding Principles for Work Redesign Teams

- We will do what is **best for the patient**
- **Patient safety** is our primary objective
- Design principles will be based on what is best for **UCH as a whole**, following **80/20** rule: 80% can be used at any UCH hospital, 20% can be facility specific
- Design will be **clinician-driven** and support standardization of clinical “**best practices**” and **medical decision-making**
- All design work will incorporate **Australian National Standards, ISO, Hospital licensing, UCH Policies & Procedures, Guidelines and Best Practice**
- Proactively identify, manage and resolve **issues to maintain the project** timeline, effectively utilize resources, and ensure design decisions are aligned with the Guiding Principle
- Design must be **benefit driven** and focused on improving performance of the organization for the **long-term future**

EMR elements that help clinicians

- One record, multiple users, multiple locations: no chasing around to access the record
- No more trying to read Doctors' handwriting
- Able to get reports quickly and not have to search for them amongst faxes
- When call Doctor in rooms or at home, they can access the record as we discuss the patient's condition, clarifying sometimes confusing discussions
- Will receive reminders when things are due, eg tasks, dressings
- Able to add orders and start processes without the Doctor physically present
- Easy documenting of care plans
- Clinical support tools and links with clinical alerts personalised for patients



EMR elements that help clinicians

- Easier investigation of incidents and discrepancies
- Can see exactly who did what when
- Able to easily find missing, misplaced, borrowed equipment and confused, wandering pts
- Able to place an order, request a service and not have to worry/remember to phone them
- Can easily find information from past encounters
- Single Sign On with “tap on, tap off” provides quick and easy access for clinicians to the EMR
- AnywhereRN allows nurses to remotely queue medication removal from ADC
- GP Notifications provides immediate discharge summary information to referring GPs, as well as to VMPs’ rooms



Lessons Learned

- Strong and extensive clinical engagement
- Close working relationships with system vendors
- Treat it as change management, not IT implementation
- Strong, high visibility executive and clinical leadership
- High capability project management

Lessons Learned (continued)

- Infrastructure delivered early
- Strong Board support
- Empowered, agile implementation team
- Train hard