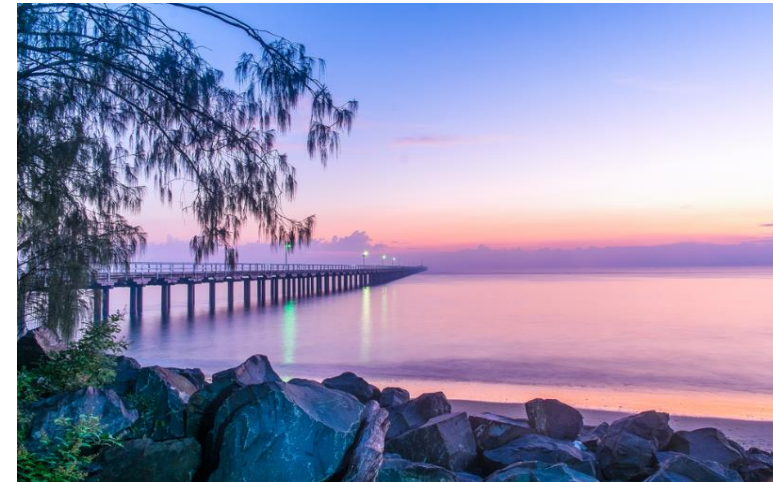




# Welcome to Hervey Bay & St Stephen's Hospital!

*We would like to respectfully acknowledge the Butchulla Traditional Owners of the land on which this event is taking place and Elders both past and present.*

*We also recognise those whose ongoing effort to protect and promote Aboriginal and Torres Strait Islander cultures will leave a lasting legacy for future Elders and leaders.*



# About UnitingCare Health St. Stephen's Hospital

*Nicholas E. Davies Enterprise Award of Excellence*

Proudly part of



# Who We Are

## Vision

- **UnitingCare Queensland will be a mission-driven provider of quality health care services in Australia.**
- **We will have excellent facilities and technology but our major strengths will be our people and partnerships.**
- **We will set the standards for accountability to patients, partners and the community.**
- **We will be known for excellent standards and for our community contributions.**

## Mission

Our mission is to improve the health and wellbeing of individuals and their families. We differentiate ourselves by living by our values, optimising our patients' care and their experiences.





# UnitingCare Hospitals



- **The Wesley Hospital**

- 536 overnight beds
- 24 operating theatres
- 19 ICU beds



- **St Andrew's War Memorial Hospital**

- 250 beds
- 15 operating theatres
- 15 ICU beds



- **Buderim Private Hospital**

- 190 beds
- 8 operating theatres
- 12 ICU/CCU beds



- **St Stephen's Hospital Hervey Bay**

- 96 beds
- 5 operating theatres



## UnitingCare Queensland

- UnitingCare Hospitals
- Child and Families
- South-East Queensland Integrated Services
- Regional and Remote Service Group





### About the Grant

- \$47M grant from HHF including \$21M for eHealth

### Services at SSHB

- 96 bed greenfield site community hospital in Hervey Bay
- Medical, surgical, oncology, 5 fully integrated operating theatre suites
- SSHB opened 13 October 2014



# Healthcare Service

- Wide Bay Burnett Region
- Fraser Coast approx 110, 000
- One of Australia's fastest growing regions
- Average age 55 years
- Health & Aged Care infrastructure investment
- 10% unemployment rate
- High DVA population



**BEDS**

- 96 Beds total
- 32 Bed Rehabilitation Ward
- 32 Bed Surgical Ward
- 32 Medical Ward

**DAY PROGRAMS**

- Rehabilitation programs:
  - Orthopaedic
  - Neurological
  - General reconditioning
  - Falls prevention
- Cardiac Rehab
- Oncology

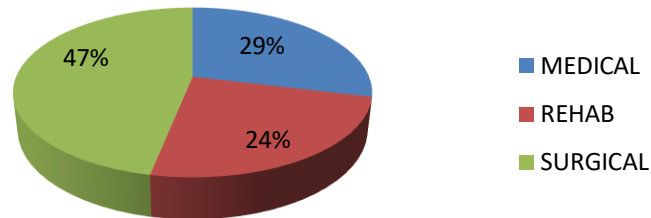
**SPECIALIST SURGICAL SERVICES**

- General surgery
- Orthopaedic
- Urology
- Ophthalmology
- ENT
- Gastroenterology
- Gynaecology
- Oral & Maxillofacial
- Vascular
- Plastic & Reconstructive
- Dental
- Bariatric

**SPECIALIST MEDICAL SERVICES**

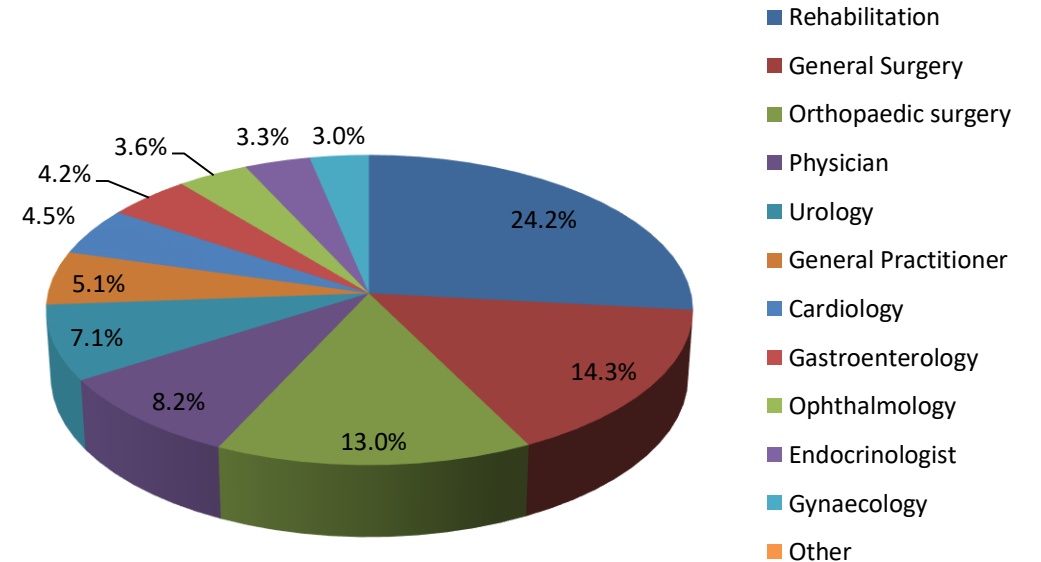
- General Medicine
- Endocrinology
- Cardiology
- Oncology/Haematology
- Dermatology
- Sleep Studies
- Rehabilitation
- Respiratory Medicine
- Nephrology
- Neurology

## St Stephen's Hospital Revenue by Medical Area FY19



**VMPs**

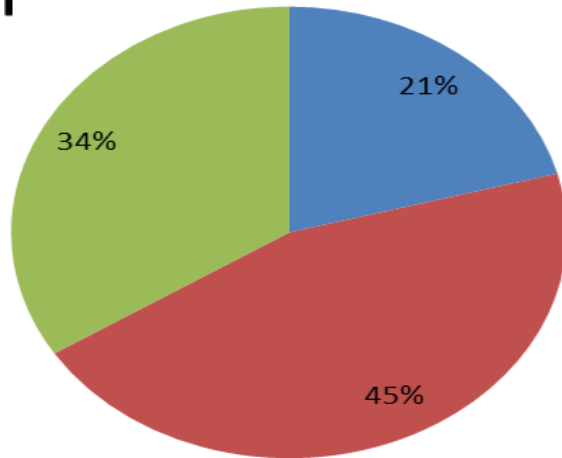
- 54 Specialist Medical and Dental VMPs



St Stephen's Hospital Total Revenue FY19 by Specialty

## SSH Staff

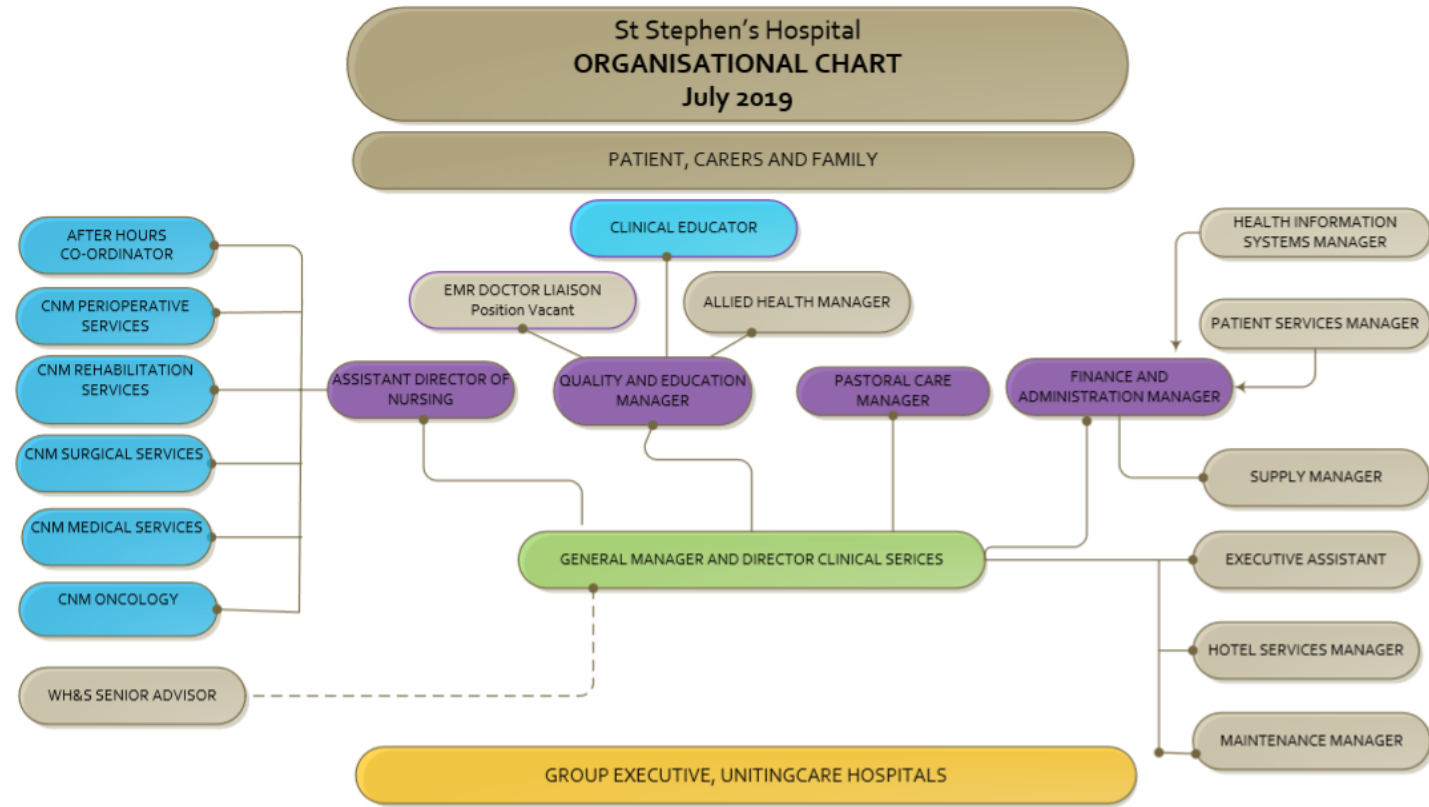
- Full Time
- Part Time
- Casual



\*Other Medicine includes Radiology, Respiratory Medicine & Ophthalmology

### STAFF

- 52 Full Time
- 113 Part Time
- 85 Casual







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

13  
October  
2014

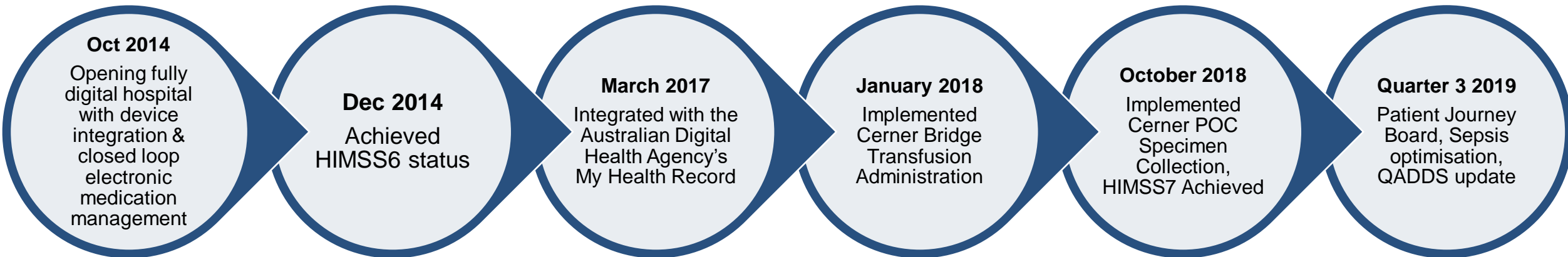
- Project Director for eHealth appointed – Connie Harmsen
- Australia's first CMIO appointed – Dr Monica Trujillo

13 October  
2014

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



# The St Stephen's Journey & System Implementation Timeline



<b>UCQueensland</b>	<b>Ann Cross</b>		<b>Craig Barke</b>	
<b>UCHealth</b>	<b>Richard Royle</b>	<b>Arthur Yannakou</b>	<b>Richard Lizzio</b>	<b>Michael Krieg</b>
<b>St Stephen's</b>	<b>Deb Boyd</b>	<b>Amanda Cruwys</b>	<b>Darren Rogers</b>	<b>Madonna Bowers</b>

## Key Learnings from Early Visits to US Fully Digital Hospitals

- ✓ 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







# Middleware Case Study

Larnie Wright, RN  
Assistant Director of Nursing



ST STEPHEN'S  
HOSPITAL



## Digital Transformation

Improve access to data and images in near-real-time, to improve the efficiencies of documentation, improve patient safety, and enhance the patient experience.



# Local Problem

October 2014

## Targeted areas for Improvement

- Improve Care Team Communication
- Improve identification of deterioration
- Decrease infection rates
- Improved management of pressure injuries
- Increase patient engagement in their healthcare journey
- Implement a scalable platform of device connectivity

# The solution:

Implementing a  
scalable device  
integration  
middleware

- ✓ **VoIP and Nurse Call Solutions**  
Vocera, Raulands
- ✓ **Clinical Decision Support Alerts**  
QADDS, Sepsis
- ✓ **Near-real-time access to data**  
VitalsLink, Remote access
- ✓ **Near-real-time access to images**  
Camera Capture, Mortara ECG
- ✓ **Medical Device Connectivity**  
Vitals, ECG, Pumps, Monitors
- ✓ **Patient Entertainment System**  
TV, Phone, Internet, Diet
- ✓ **Patient Safety**  
Ultimate Goal!



## Middleware connecting:

Electronic Room Signage

Staff Assignments

Alerts to EMR and VoIP

Single sign on and Follow Me

Vital Sign Device Connectivity

GE Monitor Integration to EMR in High Dependency and PACU

Anaesthesia Machine Integration to EMR in Operating Rooms

Meds Management – Automated Dispensing Cabinets with Patient Profiling

Unit Dose medication packaging done on site – only facility in Australia to do this

ECG Integration

PACSGear Endoscopy

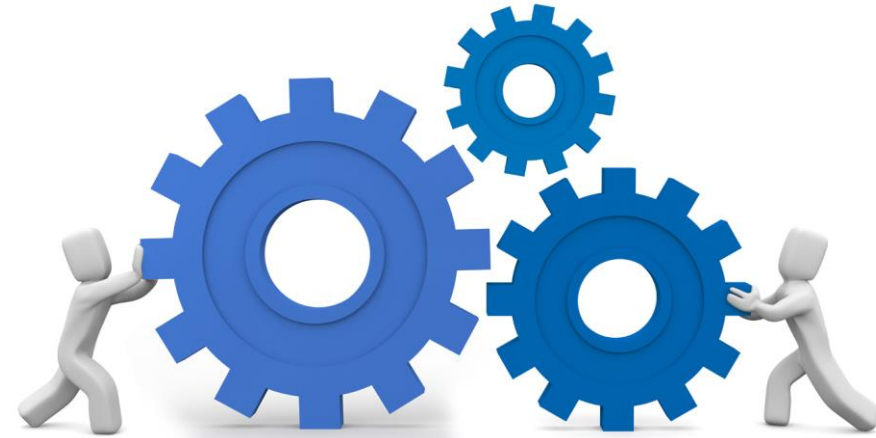
RTLS and Patient Flow

Digital Dictation

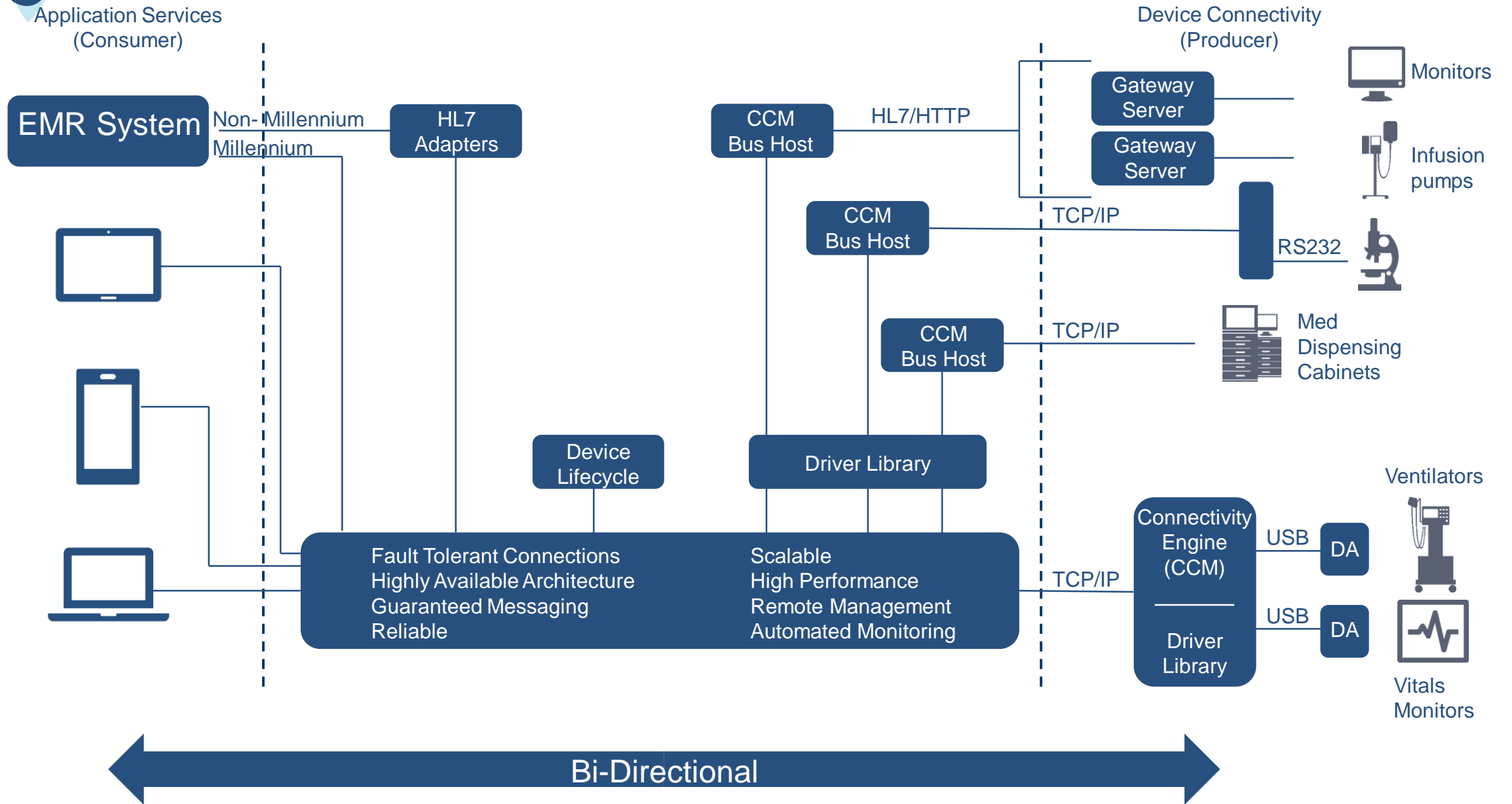
Smartpump IV Fluid Balance integration

Bedside Patient Entertainment and Nurse Call system

VoIP communications

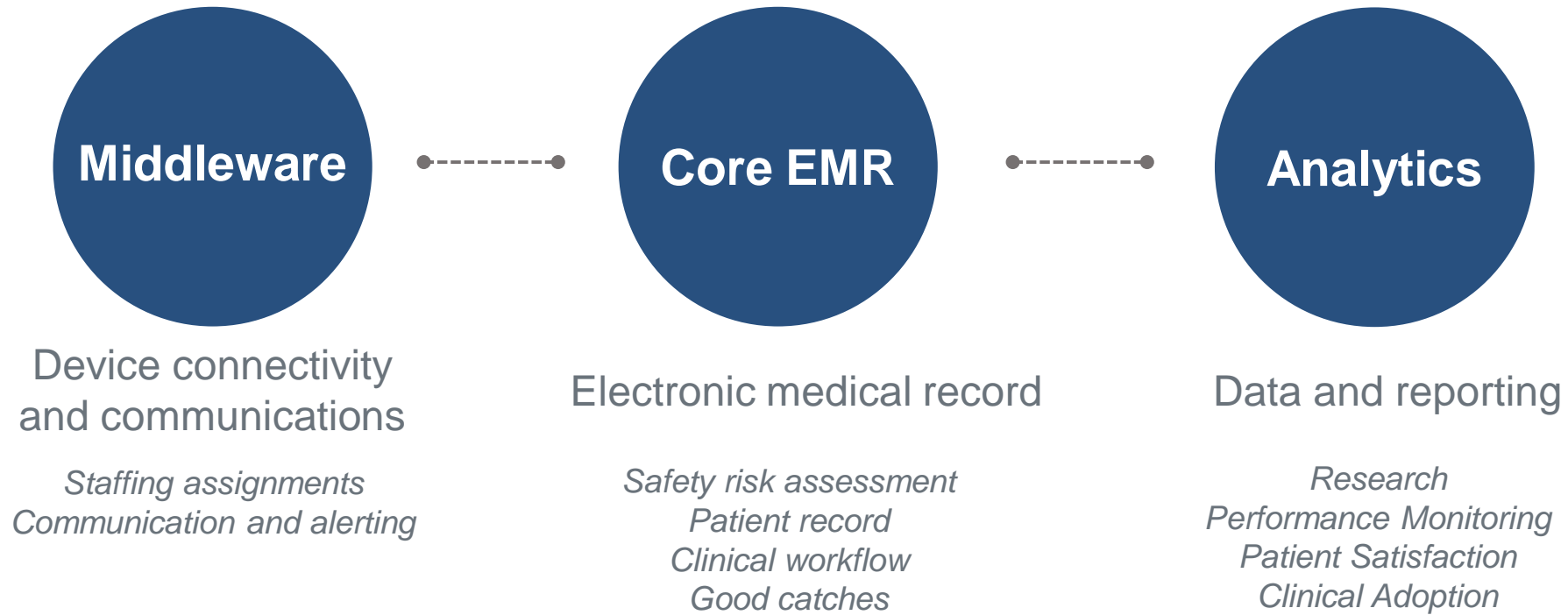


# Scalable Middleware Platform





## Digital Transformation





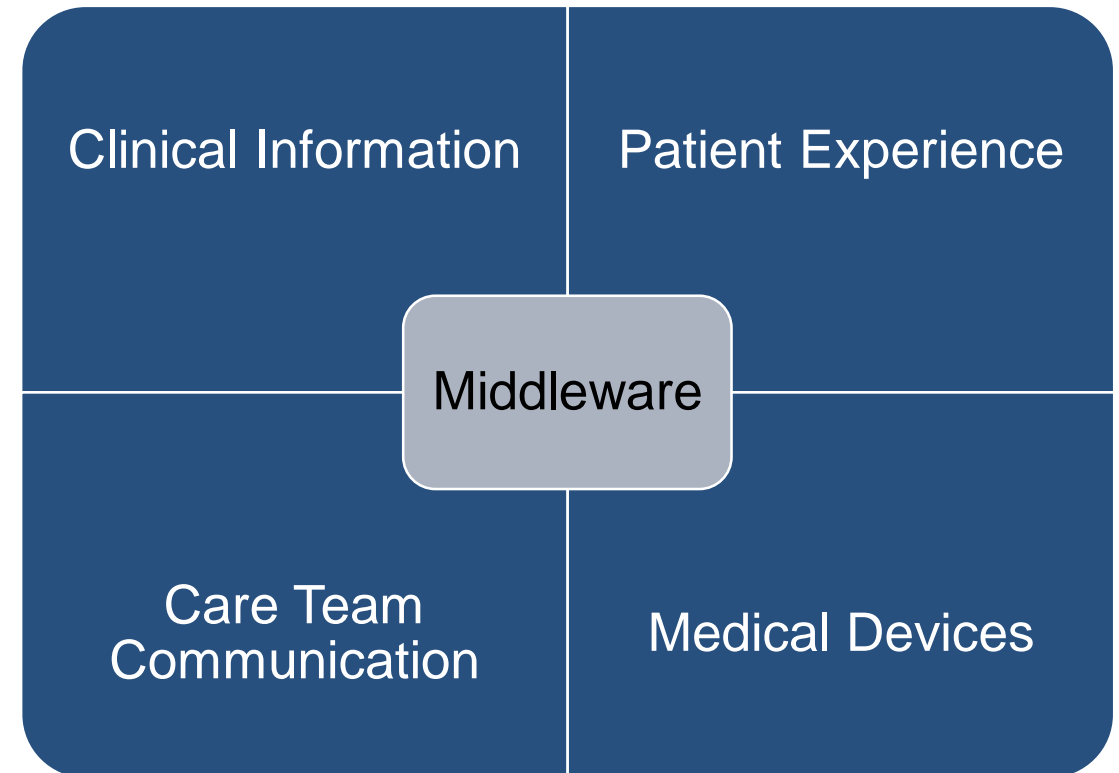
# Integration

Middleware acts as a hub and provides a scalable platform of seamless device connectivity at the point of care within the workflow to drive:

- Near-real-time monitor and device data (including images)
- Clinical Decision Support
- Care plans
- Electronic Room Signage
- Enhanced patient engagement



# Design



# Governance Tools

## Vision

Why is this important and how will our future look?

## Guiding Principles

What are the “rules”?

## Benefits

How will we measure our success?

# Guiding Principles for Work Redesign Teams



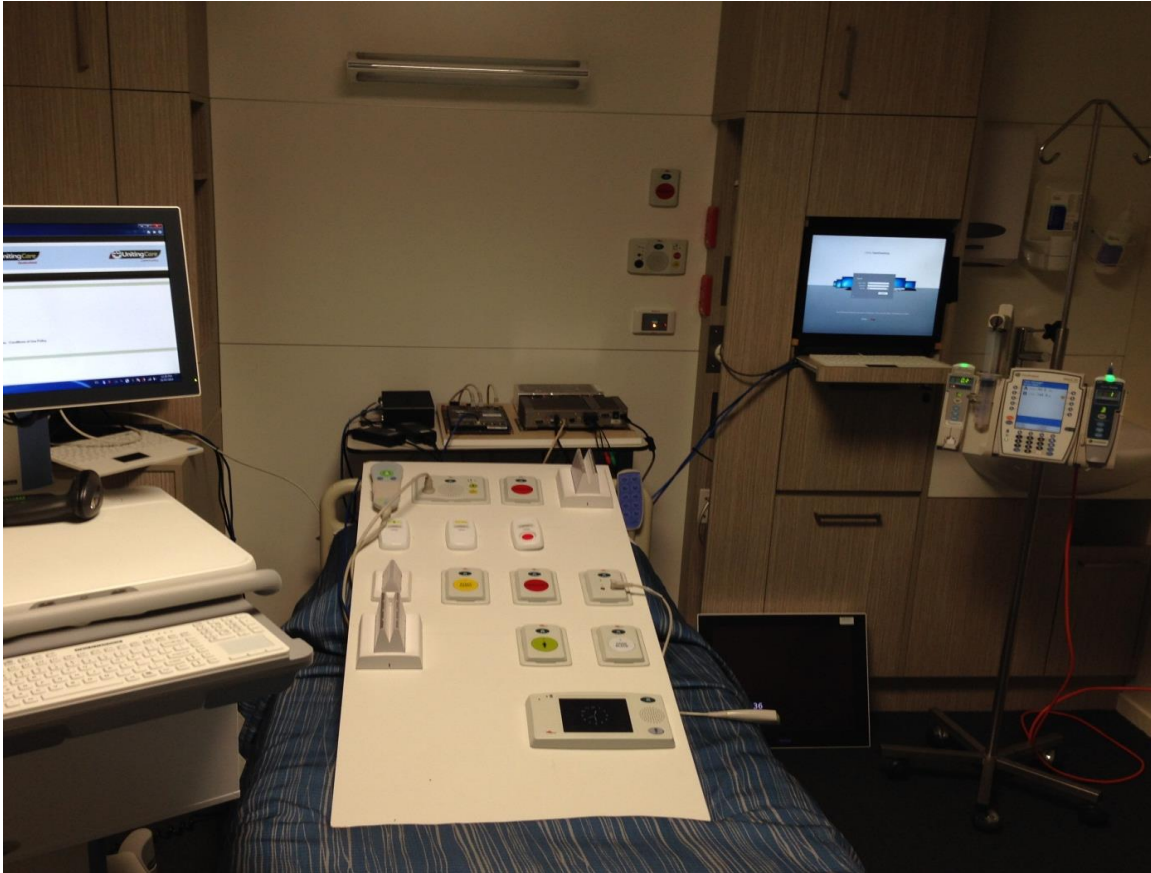
- We will do what is **best for the patient**
- **Patient safety** is our primary objective
- Design principles will be based on what is best for **UCH as a whole**, following **80/20 rule**: 80% can be used at any UCH hospital, 20% can be facility specific
- Design will be **clinician-driven** and support standardisation 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 utilise resources, and ensure design decisions are aligned with the Guiding Principle
- Design must be **benefit driven** and focused on improving performance of the organisation for the **long-term future**



- Creation of a testing domain
- Mock room
- Elbow to elbow education and support
- It took time, data, and feedback to fine tune the system
- Moving from paper to a digital environment
- Adoption of new workflows in a new facility
- Change management



# Mock Room

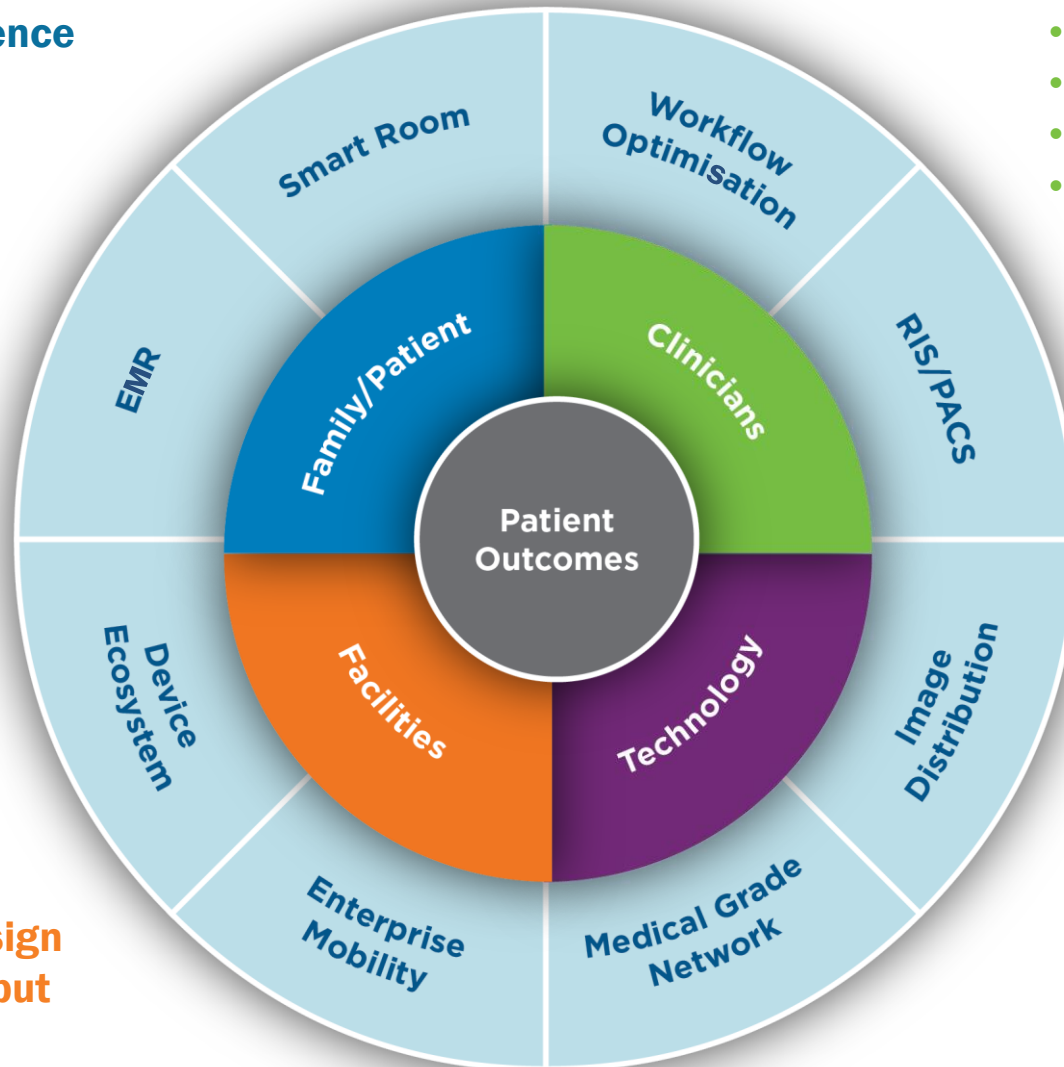


# Patient Centric Focus for Optimal Design



- Patient Experience
- Healing
- Outcomes
- Safety

- Safety
- Experience
- Optimal Workflows
- Efficiency and Reliability



- Security
- Power
- Evidence-based Design
- Efficiency/Throughput

- Mobility
- Data Security
- Engaged Connectivity
- High Reliability



# Clinical Information

- Clinical Decision Support Alerts pushed through the middleware to the care team member base on staff assignment tool
  - Sepsis
  - QADDS
  - Skin Risk Assessments
  - Prior resistant infections
- Digital data is able to be accessed at the right time, with the right context, within the workflow
  - Images
  - Skin protection protocols
  - Dashboards
  - Patient Assignments





# Real Time Vitals Collection

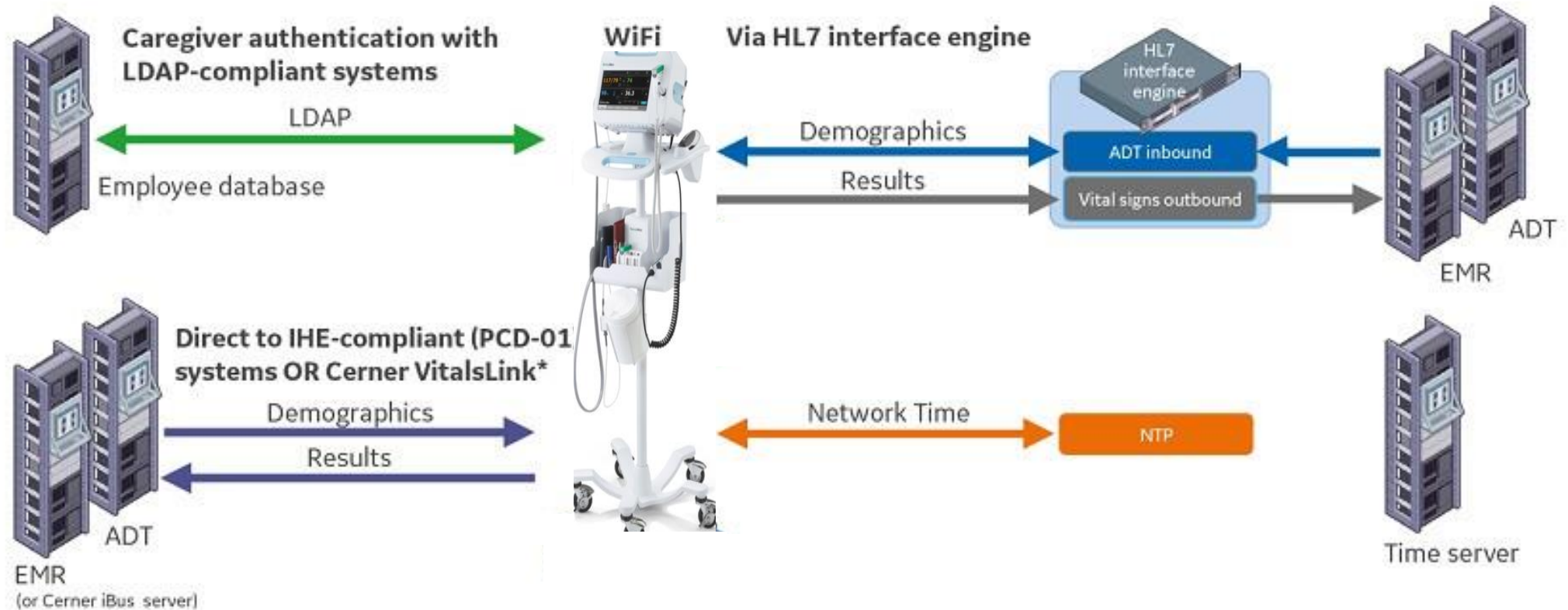
Enables clinicians to electronically send vitals at the point-of-care into any electronic medical record (EMR).

## Key Benefits

- Improves clinician workflow by decreasing documentation time
- Improves accuracy by eliminating transcription errors
- Improves access to vital signs in a timely manner
- Improves timeliness for Clinical Decision Support



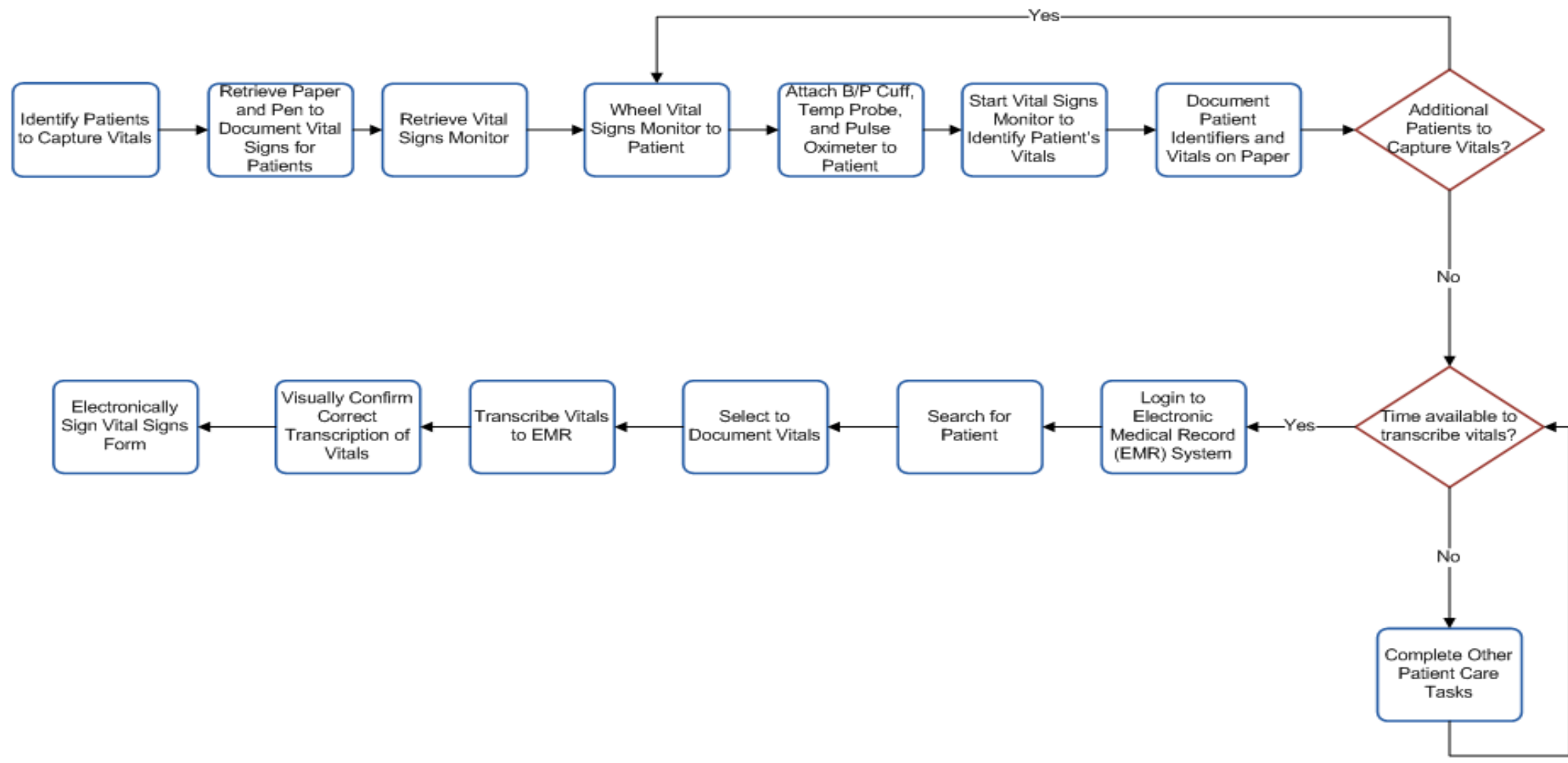
# Real Time Vitals Collection



\*Cerner VitalsLink includes caregiver authentication and all interfaces are passed through the iBus server

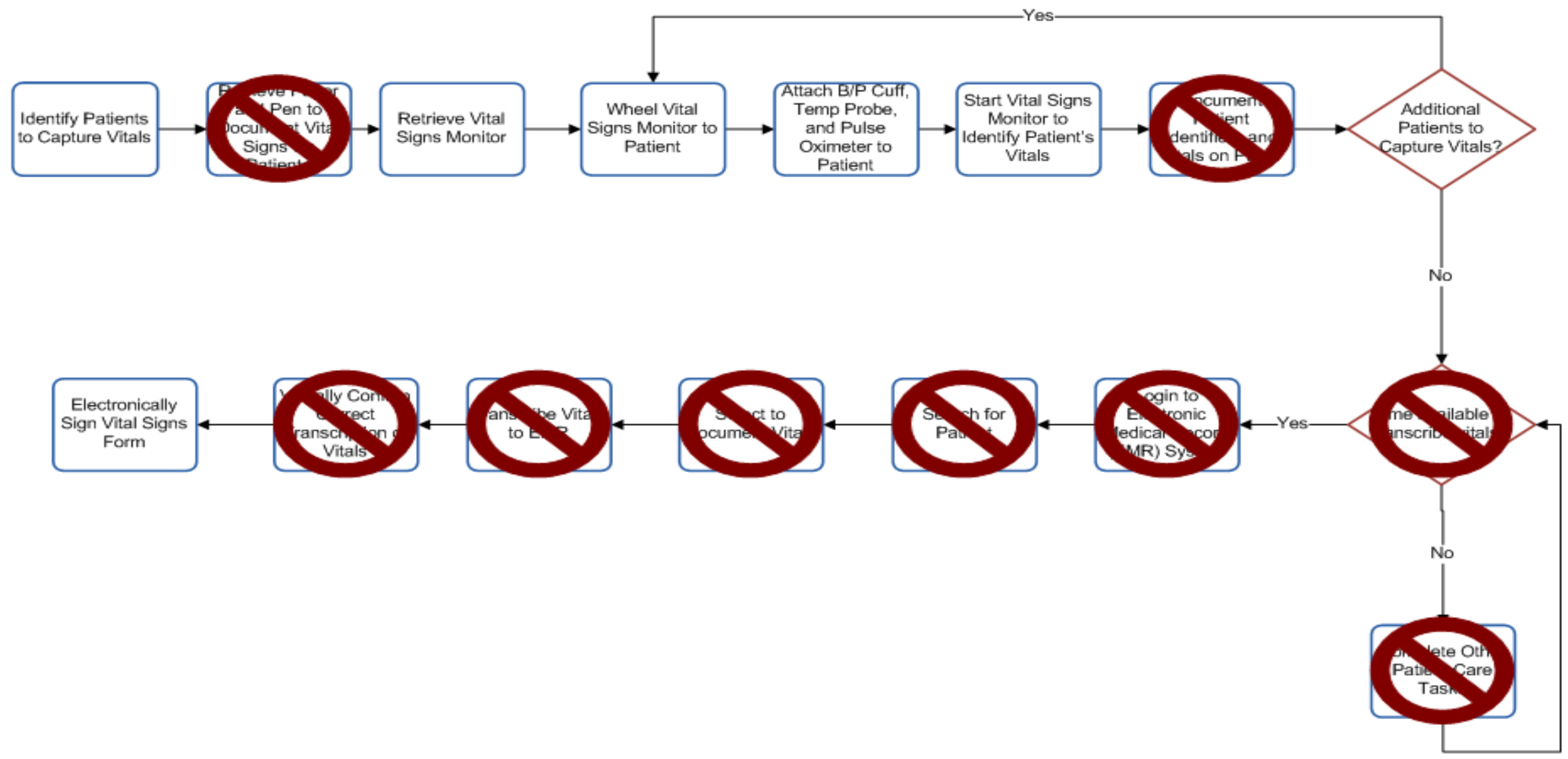
# Current Vital Signs Capture Workflow without CareAware VitalsLink

Registered Nurse / Patient Care Technician



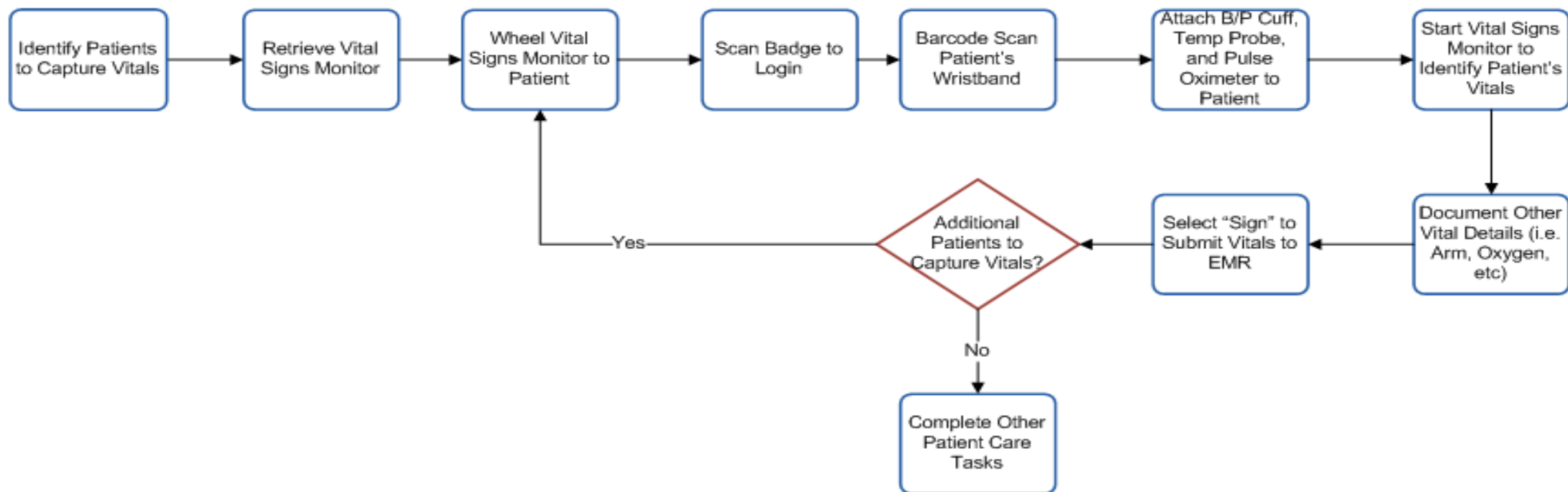
# Current Vital Signs Capture Workflow without CareAware VitalsLink

Registered Nurse / Patient Care Technician

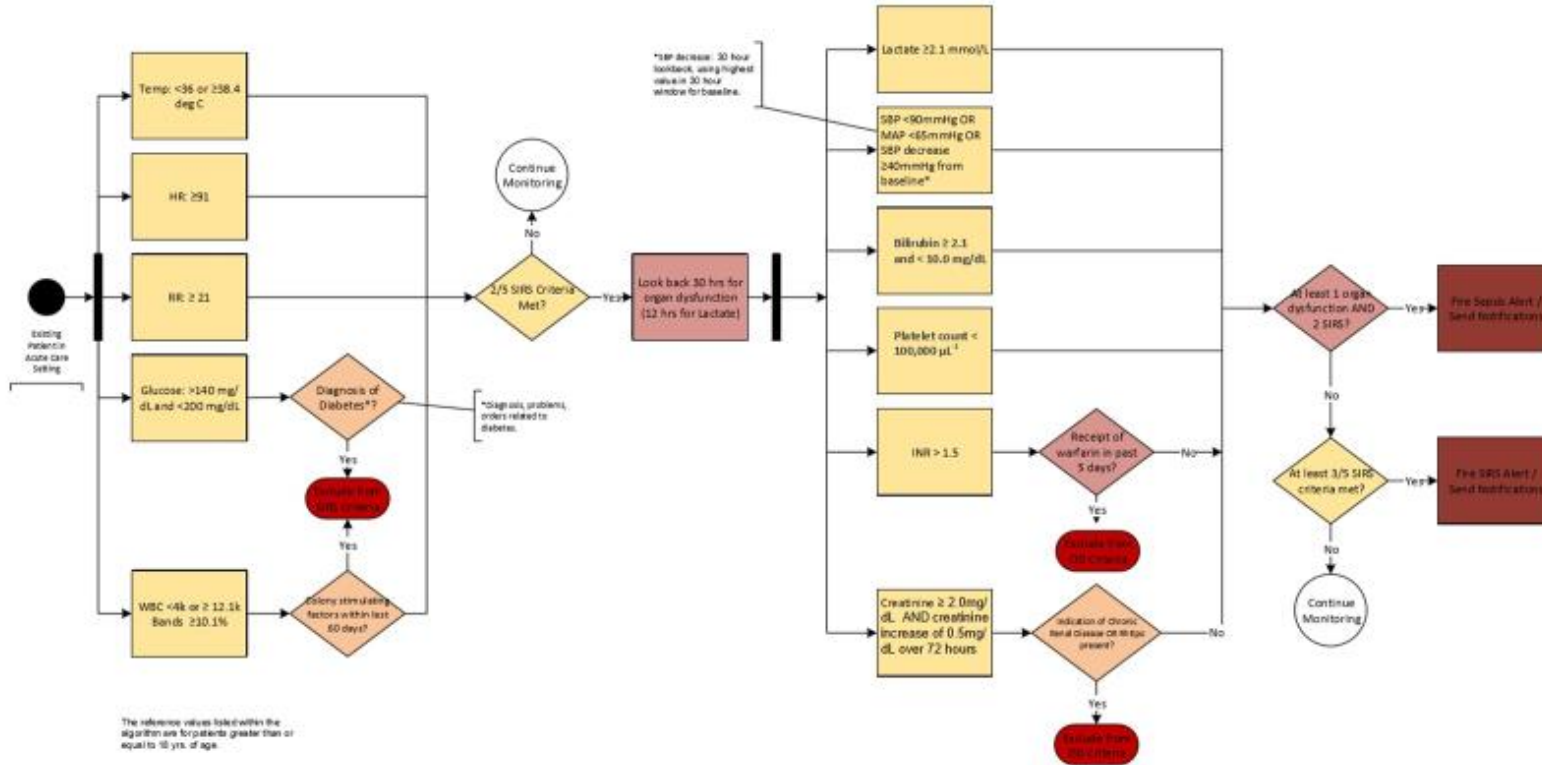


# CareAware VitalsLink Workflow

Registered Nurse / Patient Care Technician







Wiki Title: Illustrations Presentation PowerPoint Template Document ID: 130681011 Version 2 © Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.



## Recognising and Responding to Acute Deterioration Standard

8



### QADDS – Adult Deterioration Detection System

Adult	Date	Flow
<b>Respiratory Rate</b> (Breaths/Minute) Manual for a 1/2 minute	11.00	11.30
<b>O<sub>2</sub> Saturation (%)</b>	11.00	11.30
<b>O<sub>2</sub> Flow Rate (L/Minute)</b>	11.00	11.30
<b>Blood Pressure (mmHg)</b> Systolic/Diastolic	11.00	11.30
<b>Heart Rate (Beats/Minute)</b>	11.00	11.30
<b>Temperature (°C)</b>	11.00	11.30
<b>Consciousness</b> (If necessary, code patient's level using RASS)	11.00	11.30
<b>TOTAL QADDS SCORE</b>	11.00	11.30
<b>Intervention</b>	11.00	11.30

**Score Legend**

- 11 Score 0
- 12 Score 1
- 13 Score 2
- 14 Score 3
- 15 Score 4
- 16 Emergency Call

**Actions Required for Tertiary and Secondary Facilities**

**Total QADDS Score 0**

- Minimum 50 hourly Total QADDS Score

**Total QADDS Score 1-3**

- Carry out and document appropriate interventions as prescribed
- Consider increasing frequency of observations (maximum 40 hourly)
- Manage fever, pain or distress
- Review oxygen requirement
- Consider notifying/leave leader

**Total QADDS Score 4-6**

- Notify leave leader
- Request ward doctor to review patient within 30 minutes
- Carry out and document appropriate interventions as prescribed
- Hourly observations (or more frequently if indicated)
- Obtain a Total QADDS Score after interventions
- If no review within 30 minutes, escalate to register review
- If patient must leave ward area, nurse must accompany patient

**Total QADDS Score 6-7**

- Notify leave leader
- Request register to review patient within 30 minutes, ward doctor to attend
- Carry out and document appropriate interventions as prescribed
- Register to ensure consultant is notified
- Half hourly observations (or more frequently if indicated)
- Obtain a Total QADDS Score after interventions
- If no review within 30 minutes, or if unresponsive, initiate emergency call
- If patient must leave ward area, doctor and nurse must accompany patient

**Total QADDS Score 8-9**

- Initiate emergency call
- Register to ensure consultant is notified
- If patient must leave ward area, register and nurse must accompany patient

**Emergency call if:**

- Any observation is in a purple area
- Artery threat
- Respiratory or cardiac arrest
- Flow drop to O<sub>2</sub> saturation < 90%
- O<sub>2</sub> saturation < 85% without response to O<sub>2</sub>
- Sudden fall in level of consciousness
- Distress
- You are concerned about the patient but they do not fit the above criteria





# Clinical Imaging & Camera Capture

## Solutions and Workflows

- Camera Capture
- Patient Photo
- Wound Care
- Dermatology

## Improve Clinical Outcomes

Enable access to complete medical record, including all media – the Visual EMR

## Improve Workflows

Increase efficiency by removing silos of information and enabling seamless media capture.

HIMSS, Davies ✕

HIMSS, Davies      DOB:28/08/1957      Age:62 years      Gender:MALE      Loc:Ingram; 32; Bed 3

\*\* Allergies \*\*      MRN:00036085      OVERNIGHT FIN: 04794223 [Admit Dt: 28/08/2019 09:13 Disch Dt: <No - Disch

- Menu**
- SHARED
  - Results Review
  - Diagnosis & Problems
  - I View / Fluid Balance
  - Documentation
  - Form Browser
  - Notes + Add
  - Orders + Add
  - MAR
  - MAR Summary
  - Allergies + Add
  - Medication List + Add
  - Activities and Interventions
  - Immunisation History
  - Histories
  - Patient Information
  - Reference
  - Clinical Images**
  - IPOC Summary

**Clinical Images**

View Media

+ Add Show Export Inactivate Delete Find

Patient: HIMSS, Davies  
MRN: 00036085  
FIN: 04794223  
Visit Date:

Content Type: Wound Photo  
Service Date: 28/08/2019 09:56  
Create Person: Ibus, Cemer  
Date Modified: 28/08/2019 09:56  
Version Number: 1  
Name: Left Thigh Wound  
Media Type: image/jpeg  
Size(bytes): 730,315



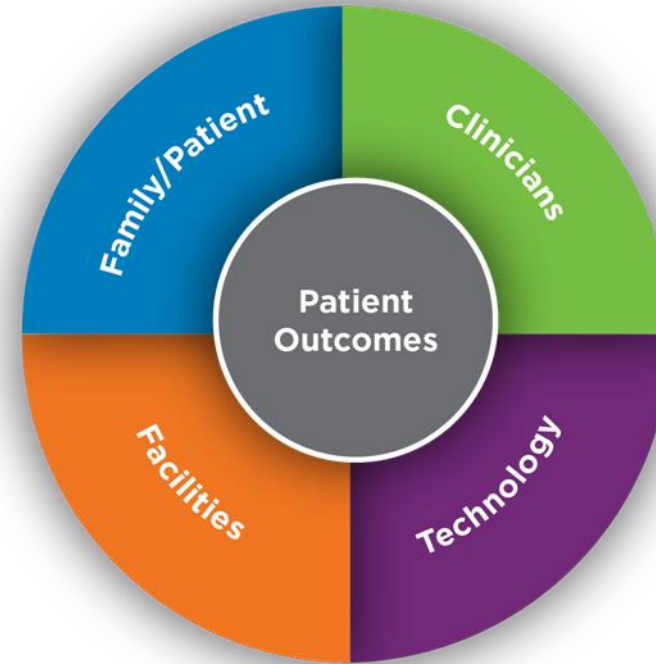
Name	Date Modified	Service Date	Size
Wound Photo			
Left Thigh Wound	28/08/2019 09:56	28/08/2019 09:56	713 kb
RIMG4571.JPG	28/08/2019 10:45	28/08/2019 10:45	659 kb



# Reduce hospital-acquired infections

Healthcare Outcomes
Reduce hospital-acquired infections
Reduce medical errors
Reduce patient falls
Reduce pain
Improve patient's sleep
Reduce patient stress
Reduce depression
Reduce length of stay
Improve patient privacy and confidentiality
Improve communication with patients and families
Improved social support
Increase patient satisfaction
Decrease staff injuries
Decrease staff stress
Increase staff effectiveness
Increase staff satisfaction

- EMR infection surveillance
- Immediate alerting for positive cultures
- Operational dashboards track infectious patients
- Patient Room sign updates biohazard risk indicator
- Room signage for visitors
- Interactive TV for education

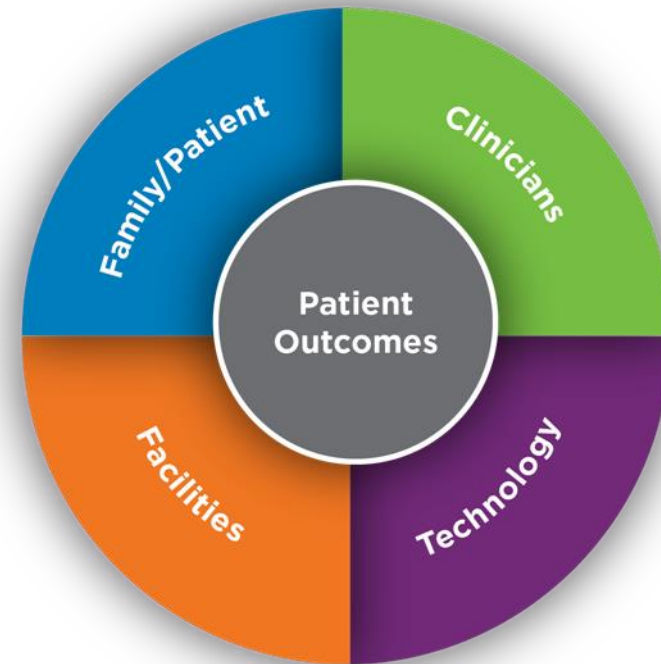




# Reduce Adverse Outcomes

Healthcare Outcomes
Reduce hospital-acquired infections
Reduce medical errors
Reduce patient falls
Reduce pain
Improve patient's sleep
Reduce patient stress
Reduce depression
Reduce length of stay
Improve patient privacy and confidentiality
Improve communication with patients and families
Improved social support
Increase patient satisfaction
Decrease staff injuries
Decrease staff stress
Increase staff effectiveness
Increase staff satisfaction

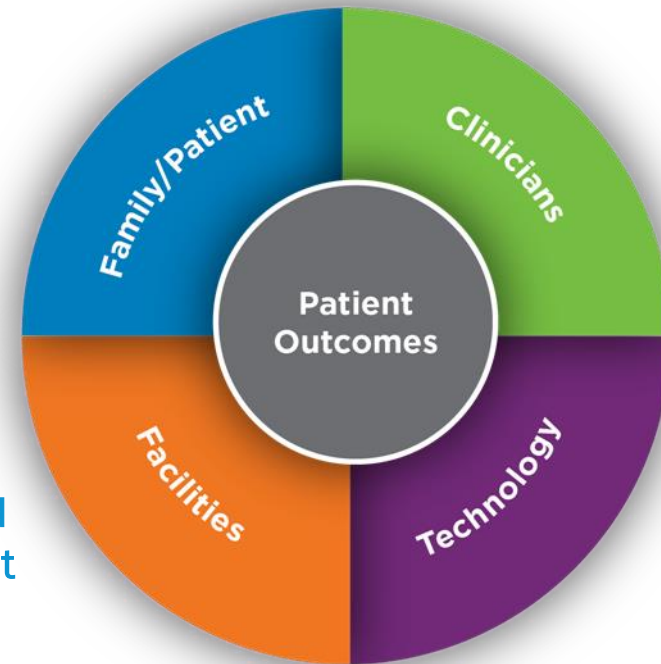
- Positive patient identification
- Closed loop medication including integrated drug cabinets
- 24/7 availability of medical records – downtime procedure
- Interactive TV for dietary orders and patient entertainment



# Reduce Length of Stay

Healthcare Outcomes
Reduce hospital-acquired infections
Reduce medical errors
Reduce patient falls
Reduce pain
Improve patient's sleep
Reduce patient stress
Reduce depression
Reduce length of stay
Improve patient privacy and confidentiality
Improve communication with patients and families
Improved social support
Increase patient satisfaction
Decrease staff injuries
Decrease staff stress
Increase staff effectiveness
Increase staff satisfaction

- Design efficiencies to promote clinical and patient workflow; standardisation of care
- Mobility solutions to improve efficiencies/communication, medical devices connectivity
- Views/audio of nature delivered through the patient engagement for relaxation
- Patient flow/Bed Management systems
- Tracking Equipment



- Delegate integration
- Improve patient safety
- The PES allows for
  - Access to entertainment
  - Education
  - Patient Meal choice
  - Access to health information
  - Results: Reduction in dietary errors



**Researchers classified the errors into one of four categories:**

1. Allergy to a food item on the tray
2. Receiving the wrong diet (e.g. not being served low-sodium or gluten-free meals)
3. Meals meant for other patients
4. Receiving a meal when medical orders say the patient shouldn't get food by mouth.

# Patient Engagement Station

## Key Benefits

- Improves patient satisfaction with the hospital experience
- Capability to comply and create consistency with the educational process
- Optimises communication workflows between patients and caregivers
- Integration with dietary system eliminating dietary adverse events



A fully-interactive patient system aimed at engaging patients and families throughout the entire care process by providing comprehensive communication education, communication and entertainment offerings.







- VoIP
- Nurse Call
- Patient Entertainment System
- Staff Link
- Capacity Management
- Integration with EMR





# Capacity Management



- Location history allows for optimal equipment utilisation
  - Lower capital device spending 10-15%
- Heads up information enhances staff awareness
  - Dramatically reduced time searching for equipment
  - Quick access to critical patient information
  - Leads to improved staff productivity
- Location based alerting
  - Improved patient safety
- Scalable platform to provide automated real-time patient location updates in Millennium







Time Interval: **Current Day** | Number of Jobs: Total: 18 | Discharge: 18 Avg/hr: 2.12 | Adhoc: 0 Avg/hr: 0 | Average Turn-Around Time: 1274 minutes | Average Response Time: 0 minutes | Response Time Interval: 5 minutes | Custodial Hours: 0 hours 0 minutes

Statu...	Type	Priority	Request T...	Scheduled...	Start Time	Comment	Custodian	Isolation	Location
Dirty	Disch...	Routi...	27/08/201...	27/08/201...		Standard Discharge Clean	Gorlick, Kristine		Alston Ward-Alston 27, Bed 27
Dirty	Disch...	Routi...	27/08/201...	27/08/201...		Standard Discharge Clean	Bates, Jeanette		Alston Ward-Alston 32, Bed 32
Occu...	Disch...	Routi...	28/08/201...	28/08/201...		Standard Discharge Clean			Alston Ward-Alston 19, Bed 19
Dirty	Disch...	Routi...	28/08/201...	28/08/201...		Standard Discharge Clean			Alston Ward-Alston 01, Bed 1
Dirty	Disch...	Routi...	28/08/201...	28/08/201...		Standard Discharge Clean	Harris, Lorraine		McPhail Ward-McPhail 05, Bed 5

Bed Board

Favorites | Available: 32 | Occupied: 16 | Dirty: 3 | Cleaning: 0 | Blocked: 0 | Out of Service: 0 | Held: 0 | Reserved: 0 | Virtual: 0 | Patient Attribute | Location Attribute

Patient:

Summary | Global Search

Alston Ward				50%		Anaesthetics Bays	0%		PACU Stage 1	0%		Patient Hold
Alston 01, Bed 1	Alston 09, Bed 9	Alston 17, Bed 17	Alston 25, Bed 25	Anaes Bay 1, A	PACU 1, 1	Pat Hold						
Alston 02, Bed 2	Alston 10, Bed 10	Alston 18, Bed 18	Alston 26, Bed 26	Anaes Bay 2, A	PACU 1, 2	Pat Hold						
Alston 02, Bed 3	Alston 11, Bed 11	Alston 19, Bed 19	Alston 27, Bed 27	Anaes Bay 3, A	PACU 1, 3							
Alston 04, Bed 4	Alston 11, Bed 12	Alston 20, Bed 20	Alston 28, Bed 28	Anaes Bay 4, A	PACU 1, 4							
Alston 05, Bed 5	Alston 13, Bed 13	Alston 21, Bed 21	Alston 29, Bed 29	Anaes Bay 5, A	PACU 1, 5							
Alston 06, Bed 6	Alston 14, Bed 14	Alston 22, Bed 22	Alston 30, Bed 30		PACU 1, 6							
Alston 07, Bed 7	Alston 15, Bed 15	Alston 23, Bed 23	Alston 31, Bed 31		PACU 1, 7							
Alston 08, Bed 8	Alston 16, Bed 16	Alston 24, Bed 24	Alston 32, Bed 32		PACU 1, 8							
					PACU 1, 9							

Metrics

Bed Utilization 1/32  
3%

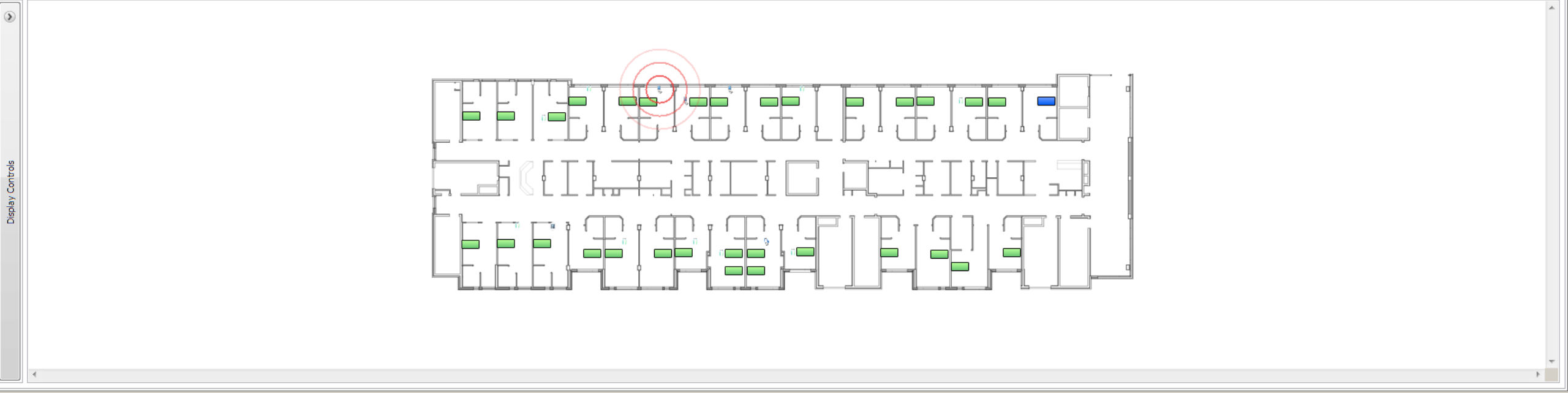
Average Length of Stay 23:17

Transfer Jobs ( 1 )  
Patient: 1

Custodial Jobs ( 0 )  
Adhoc: 0  
Discharge Clean: 0

Transport Jobs ( 0 )  
Patient (Adhoc): 0  
Patient (Transfer): 0  
Equipment (Adhoc): 0

Discharges ( 16 )  
Pending: 0  
Confirmed: 16



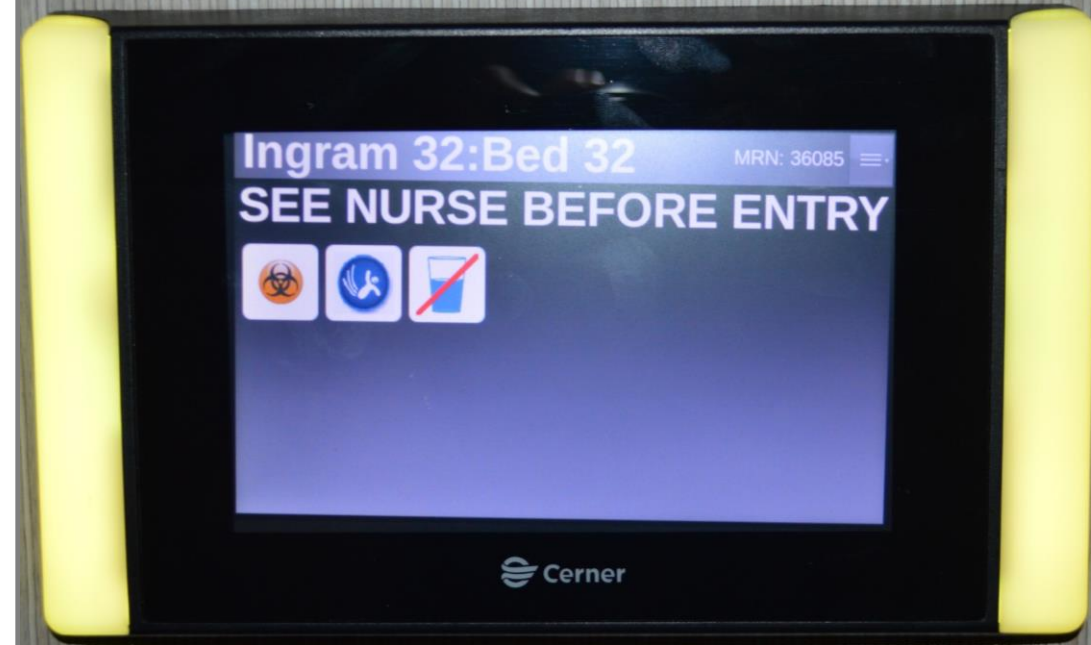
Description	Model Number	RTLS Location	Classification Type	Manufacturer	Lease...	Owning Location	Serial Number	Asset Control Number	Comment	Badge ID
Workstation on Wheels		<a href="#">Alston Ward-Corrido...</a>	WoW	Advantec		Ingram Ward	TBNB130246	700157		114013
Workstation on Wheels		<a href="#">Ingram Ward-Ingra...</a>	WoW	Advantec		Ingram Ward	TBN4140182	700178		114129
Workstation on Wheels		<a href="#">Ingram Ward-Ingra...</a>	WoW	Advantec		Ingram Ward	TBN4140181	700149		114123
Workstation on Wheels		<a href="#">Ingram Ward-Corrid...</a>	WoW	Advantec		<a href="#">McPhail Ward</a>	TBN4140177	700172		114148
Workstation on Wheels		<a href="#">Ingram Ward-Corrid...</a>	WoW	Advantec		<a href="#">McPhail Ward</a>	TBN4140174	700173		114149
Workstation on Wheels		<a href="#">Ingram Ward-Corrid...</a>	WoW	Advantec		Ingram Ward	TBN4140165	701331		114127
Workstation on Wheels		<a href="#">Ingram Ward-Corrid...</a>	WoW	Advantec		Ingram Ward	TBN4140162	700165		114124
Workstation on Wheels		<a href="#">IT Offices</a>	WoW	Advantec		Ingram Ward	TBN4140161	700185		114139
Workstation on Wheels		<a href="#">Ingram Ward-Ingra...</a>	WoW	Advantec		<a href="#">McPhail Ward</a>	TBN4140160	700182		114122



# Digital Room Signage

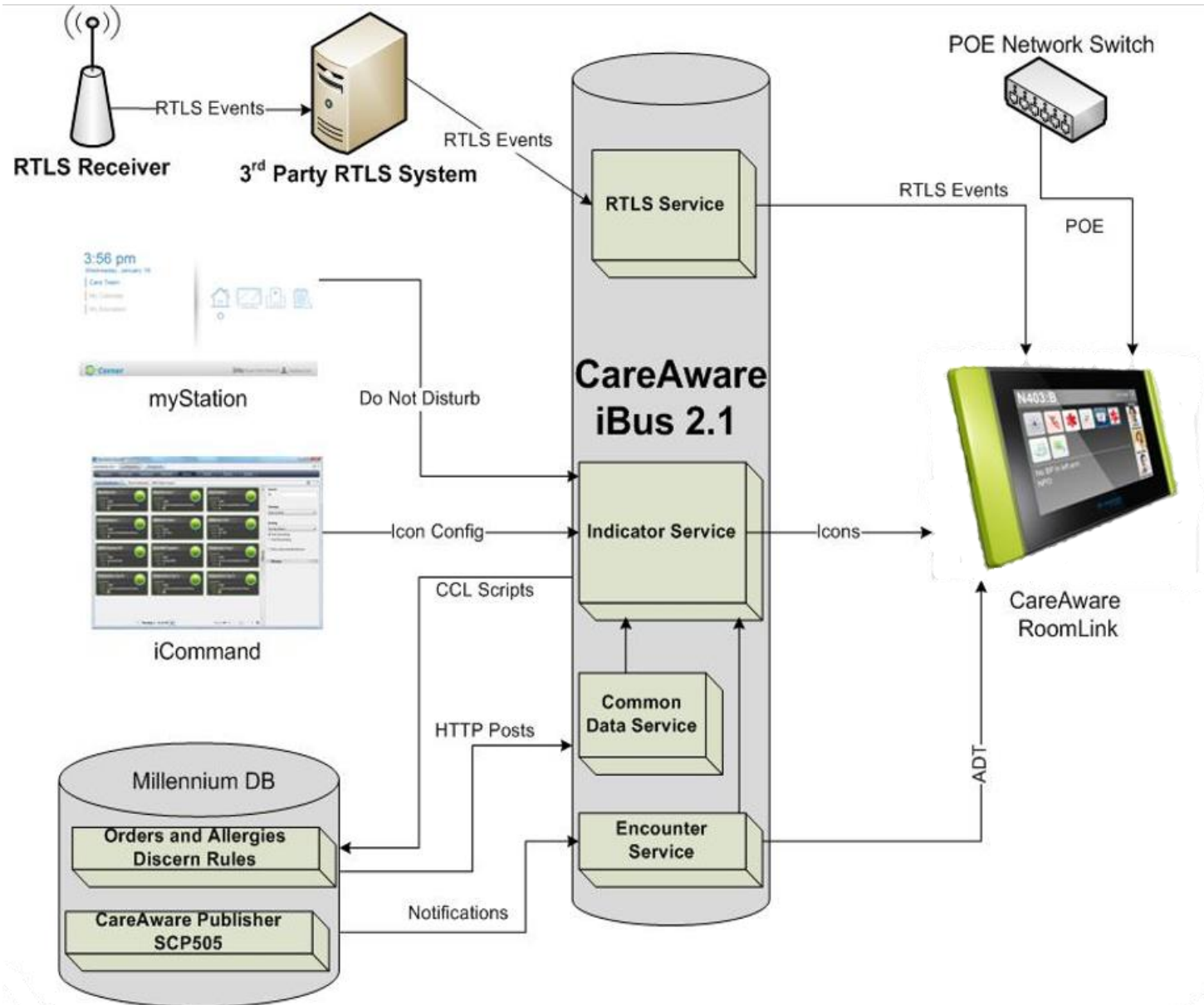
## Key Benefits

- Allows access to pertinent information at-a-glance
- Improves communication with clinicians, family members and hospital staff
- Displays information and icons for warnings and notifications in real-time.



Digital signage solution displays key patient information to clinicians, hospital staff and family members outside the entrance of the patient room.

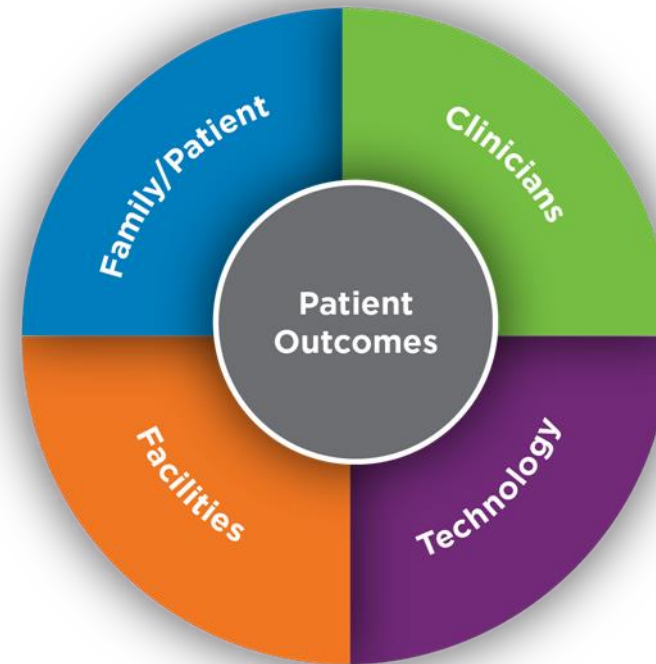
# RoomLink Connectivity



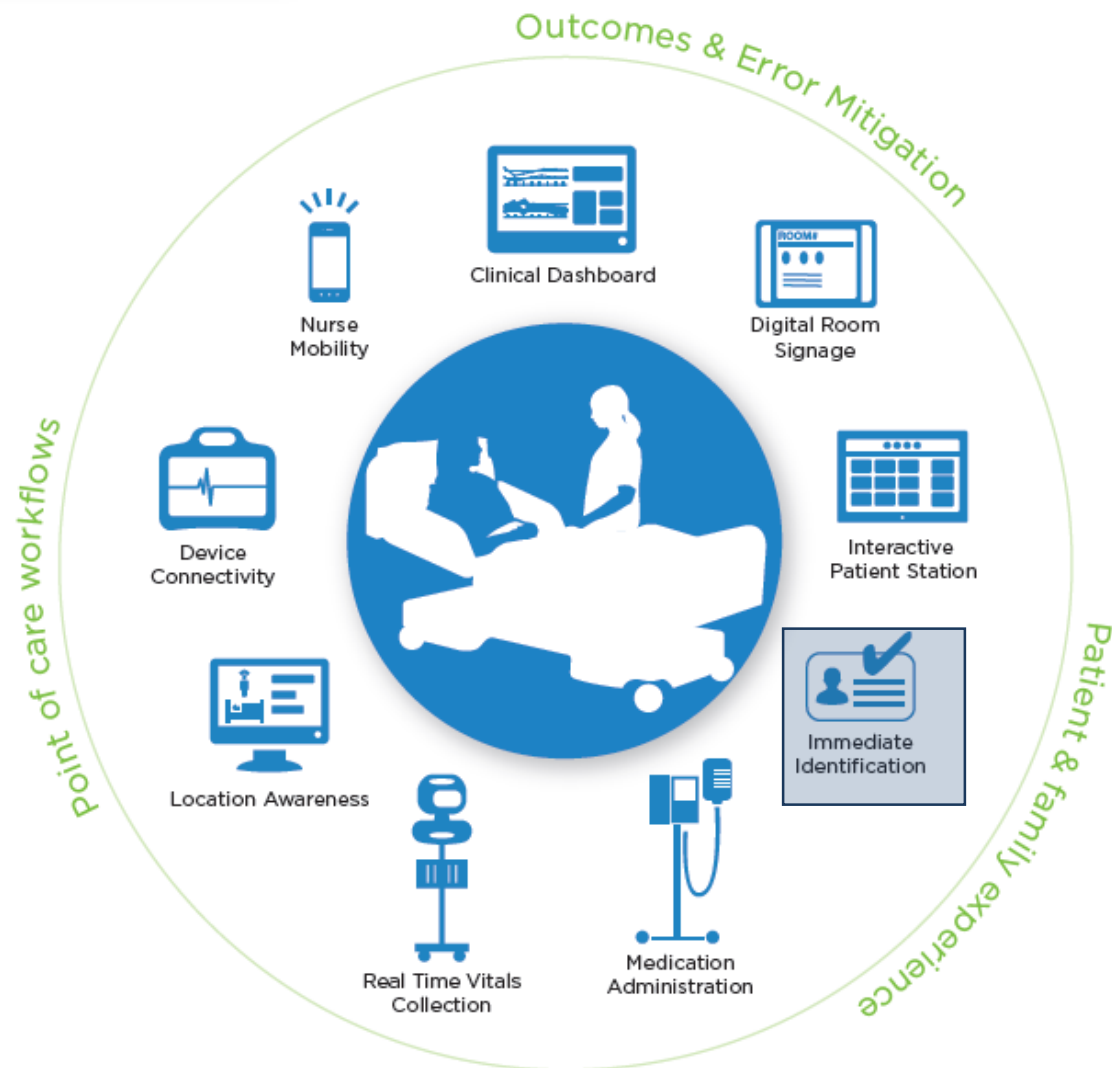
# Improve Communication w/Patient & Family

Healthcare Outcomes
Reduce hospital-acquired infections
Reduce medical errors
Reduce patient falls
Reduce pain
Improve patient's sleep
Reduce patient stress
Reduce depression
Reduce length of stay
Improve patient privacy and confidentiality
Improve communication with patients and families
Improved social support
Increase patient satisfaction
Decrease staff injuries
Decrease staff stress
Increase staff effectiveness
Increase staff satisfaction

- Family communication via Perioperative tracking board
- Improved communication via in-room patient engagement
- Patient & Family education delivered directly from care plan
- Nurse call and alarm response to patient via caregiver mobile device
- Digital room signage displaying real time patient care information



# Digital Transformation







# An Extension....

Smart Room



Smart Unit



Smart Facility





# Lessons Learnt

- Required a multidisciplinary team approach with the support and guidance of leadership and key stakeholders
- Create a testing domain to ensure the functionality met requirements
- Mock room for hands on education
- Elbow to elbow education and support
- Patient and family education
- Time commitment, data, and feedback loops to fine tune and tweak the system to gain adoption
- Allowing additional time for adoption to occur and constant sharing of data to show improvements in process and areas of opportunity where necessary for change management to take place



LESSONS  
LEARNT

# Value Derived

Hospital transmitted  
MRO rates as low as 0%

Accuracy of vital sign  
documentation improved

Zero dietary adverse  
events

Overall decrease in  
LOS

Sustained positive  
Patient Satisfaction

Decrease in  
readmissions

Decrease in falls

Decrease in  
pressure injuries

## Patient Discharge Survey

### Net Promoter Score



### Overall Hospital Rating\*



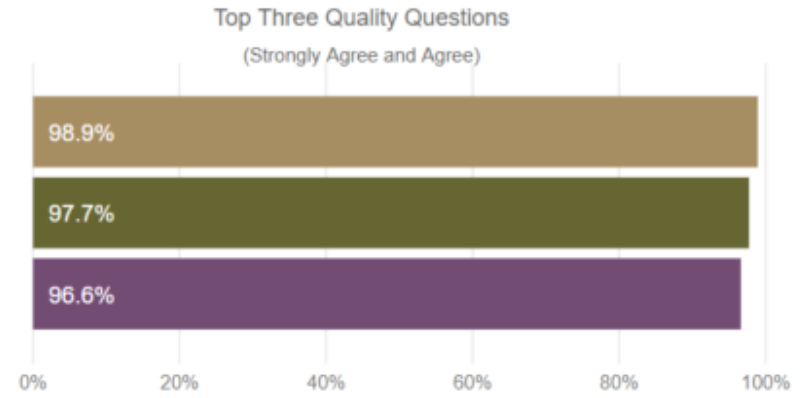
### Overall Quality Rating^



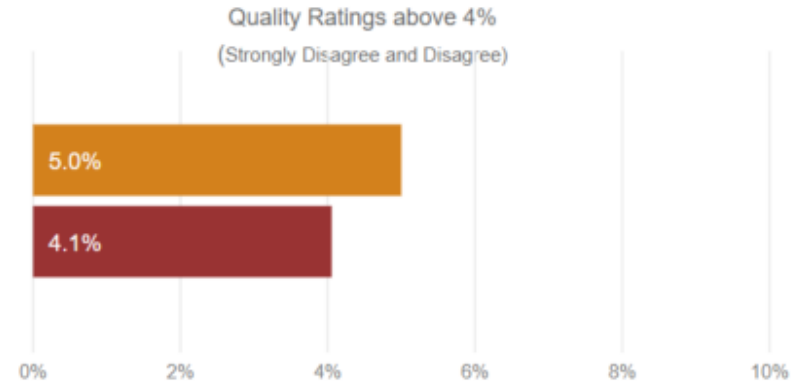
Nursing	4.80 /5	0.00
Doctors	4.74 /5	4.74
Allied Health	4.57 /5	4.57
Food	3.76 /5	3.76
Noise	4.53 /5	4.53
Cleanliness	4.87 /5	3.76

Difference to ytd

I felt cared for  
My individuals needs were met  
I received pain relief that met my needs



I know exactly what each of my medications is for  
The information provided to me was enough to prepare me for discharge

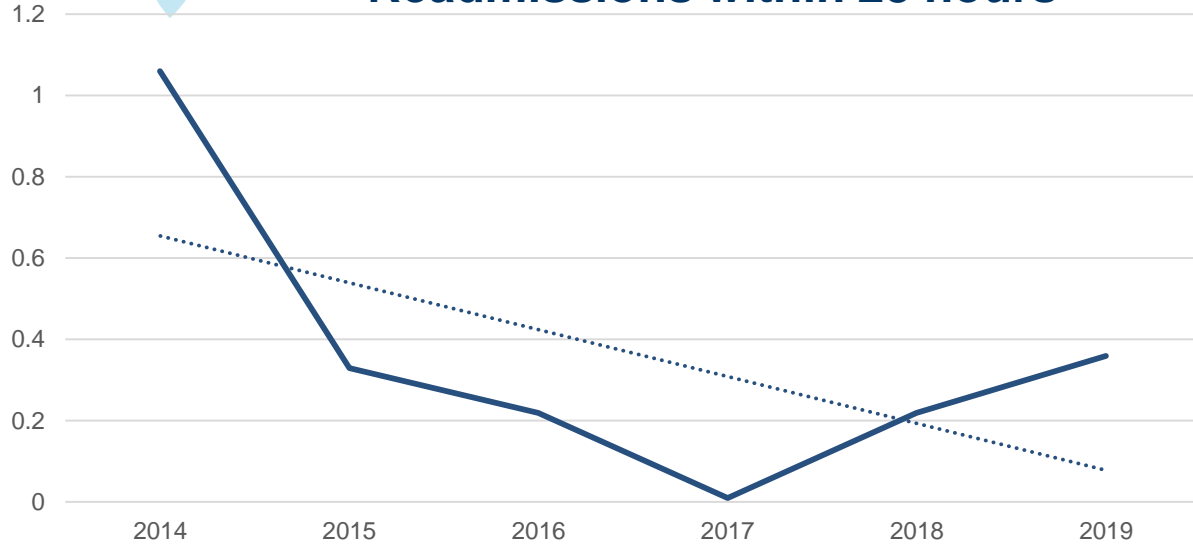


\* Overall Hospital Rating is defined as the mean score from the question: 'How would you rate the hospital overall?'

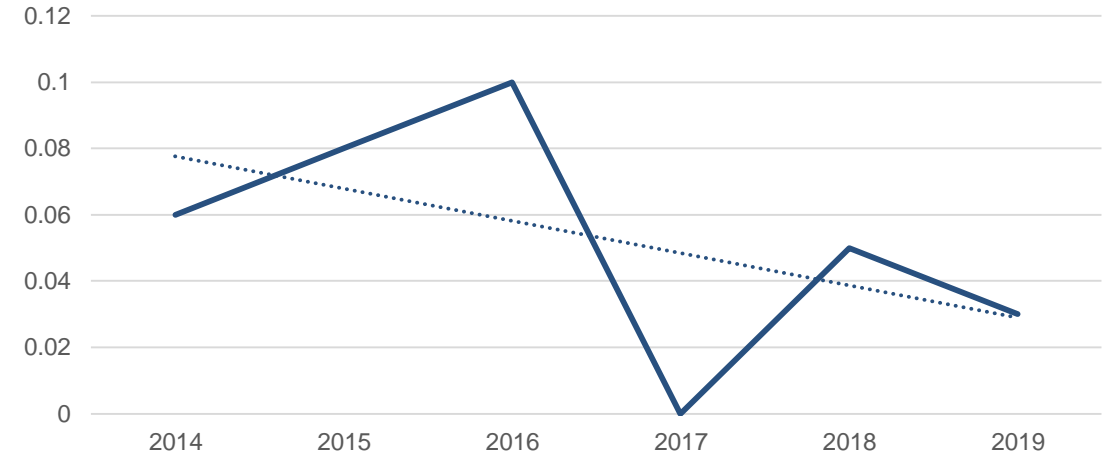
^Overall Quality Rating is defined as the mean score from the question: 'How would you rate the overall quality of your care?'



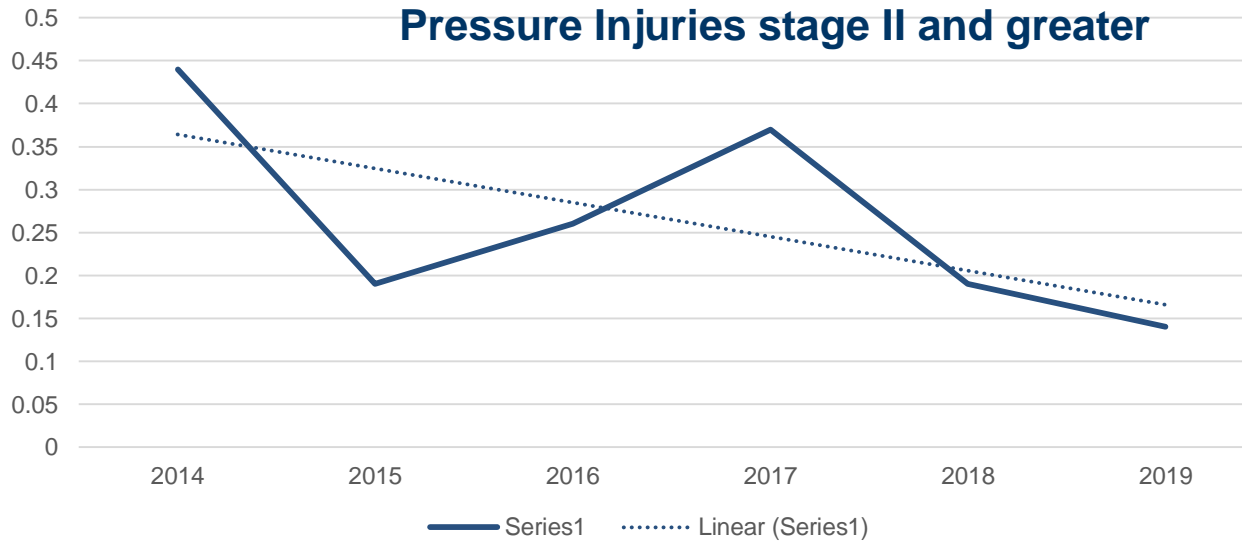
## Readmissions within 28 hours



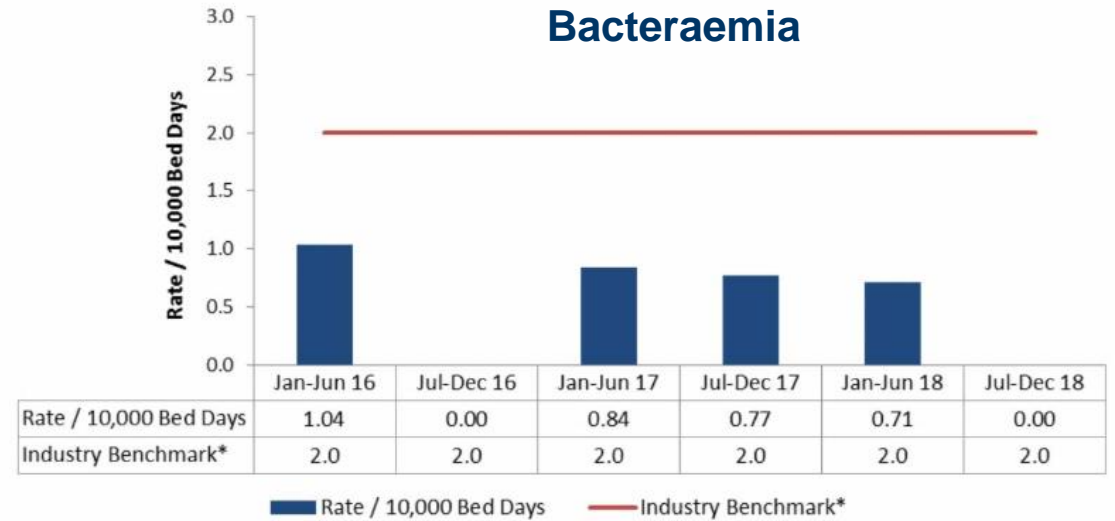
## Falls with significant injury's



## Pressure Injuries stage II and greater



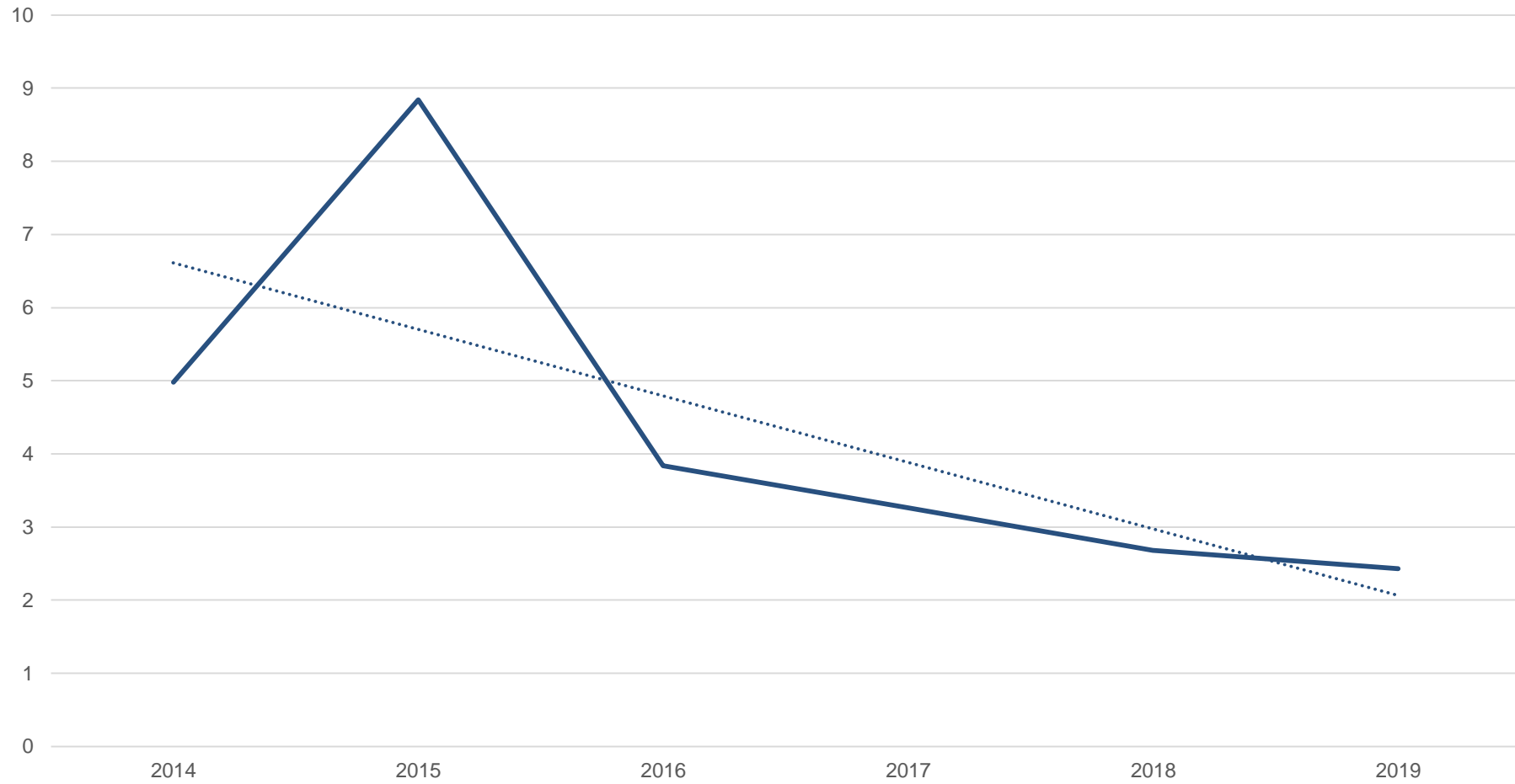
## Healthcare-associated Staph aureus Bacteraemia



\* National Healthcare Agreement performance indicator



## Length of Stay





# In Summary



- **Local problem:** Improve the access to data and images in near-real-time, improve the efficiencies of documentation, improve patient safety, and enhance the patient experience.
- **Design and Implementation:** The focus of the digital hospital went beyond the electronic health record (EMR) and included a scalable platform to meet the need for device connectivity. Examples of targeted areas for improvement included communication to the care team regarding infection control, near-real-time monitor and device data (including images), and enhanced patient engagement.
- **Healthcare IT:** These integration points represent a hub and spoke model where the middleware acts as the hub and provides seamless connectivity at the point of care within the workflow to drive CDS, care plans, electronic room signage which keeps the care team and family up-to-date on patient risks and restrictions, to connect the right care team member to the right patient for communication needs, and to engage the patient in activities.
- **Value derived:** A decrease in infection rates has been sustained over the last 4+ years. Vital sign documentation improved timing for the QADDS and sepsis alerts. There were improvements in: LOS, infection rates, falls, readmissions, and patient satisfaction.



