

UnitingCare Health

Hervey Bay Digital Hospital



Closed Loop Electronic Medication Management : A New Paradigm ?

Jodie Austin

Clinical Informatics Pharmacist

UnitingCare Health

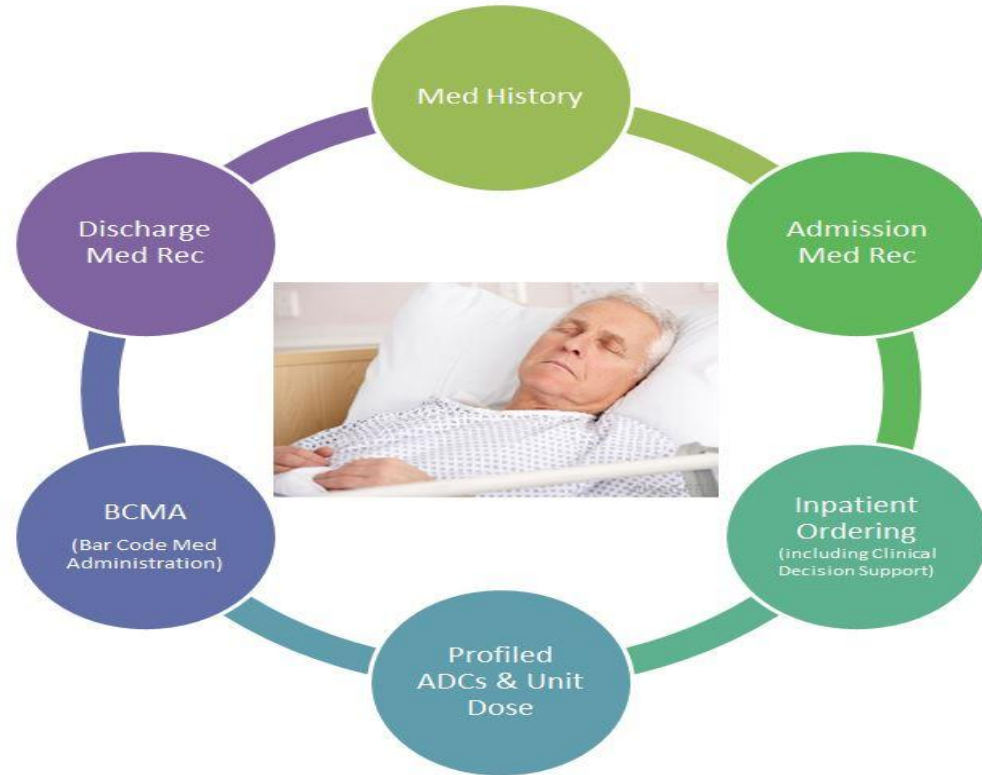
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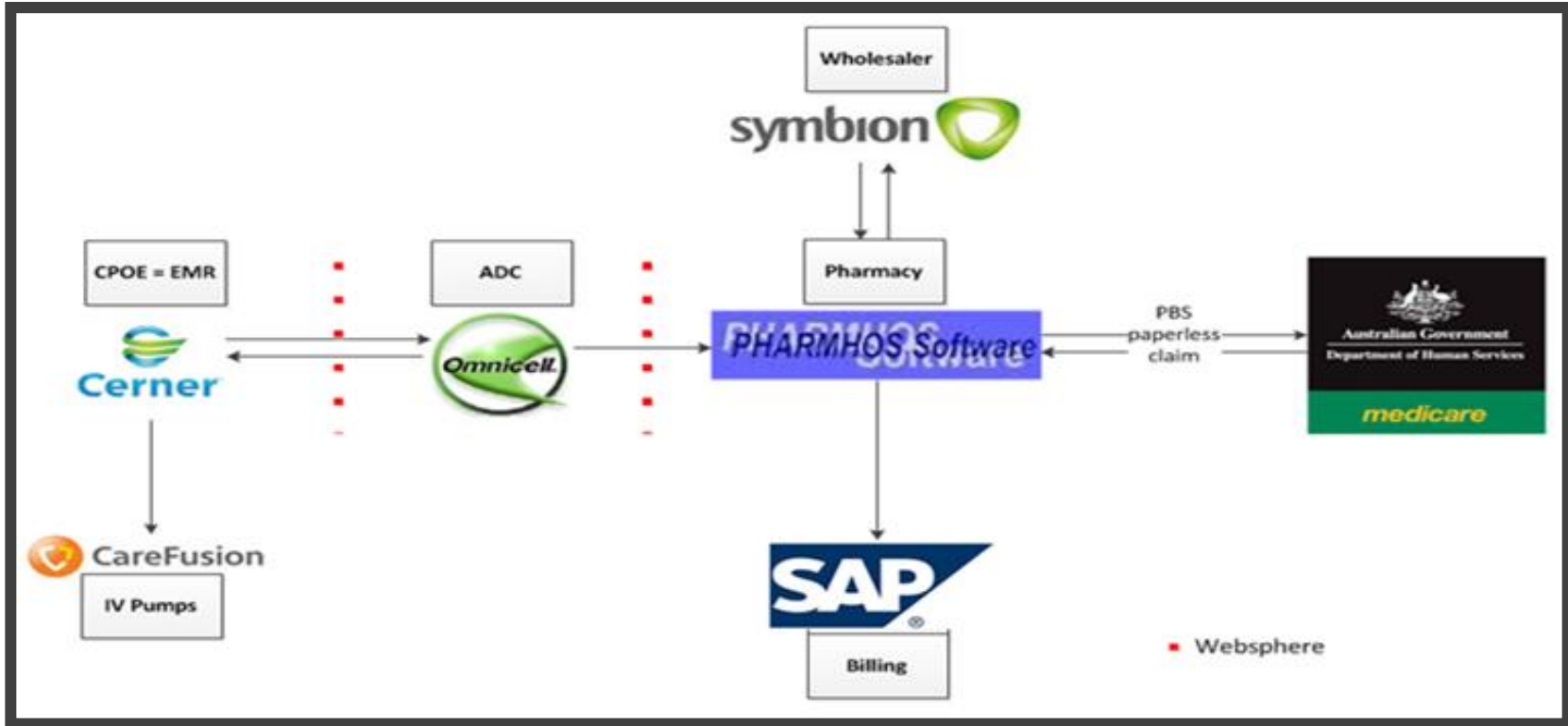
Closed Loop Electronic Medication Management (CLEMM)

The HIMSS EMR Adoption Model™ (EMRAM) identifies the levels of EMR capabilities required for Stage 6 & 7 as:

“The closed loop medication administration with bar coded unit dose medications environment is fully implemented. The eMAR and bar coding or other auto identification technology, such as radio frequency identification (RFID), are implemented and Integrated with CPOE and pharmacy to maximise point of care patient safety processes for medication administration. The “five rights” of medication administration are verified at the bedside with scanning of the bar code on the unit dose medication and the patient ID.”



CLEMM: Integration and Interfaces



Technology Enabled – Doctors

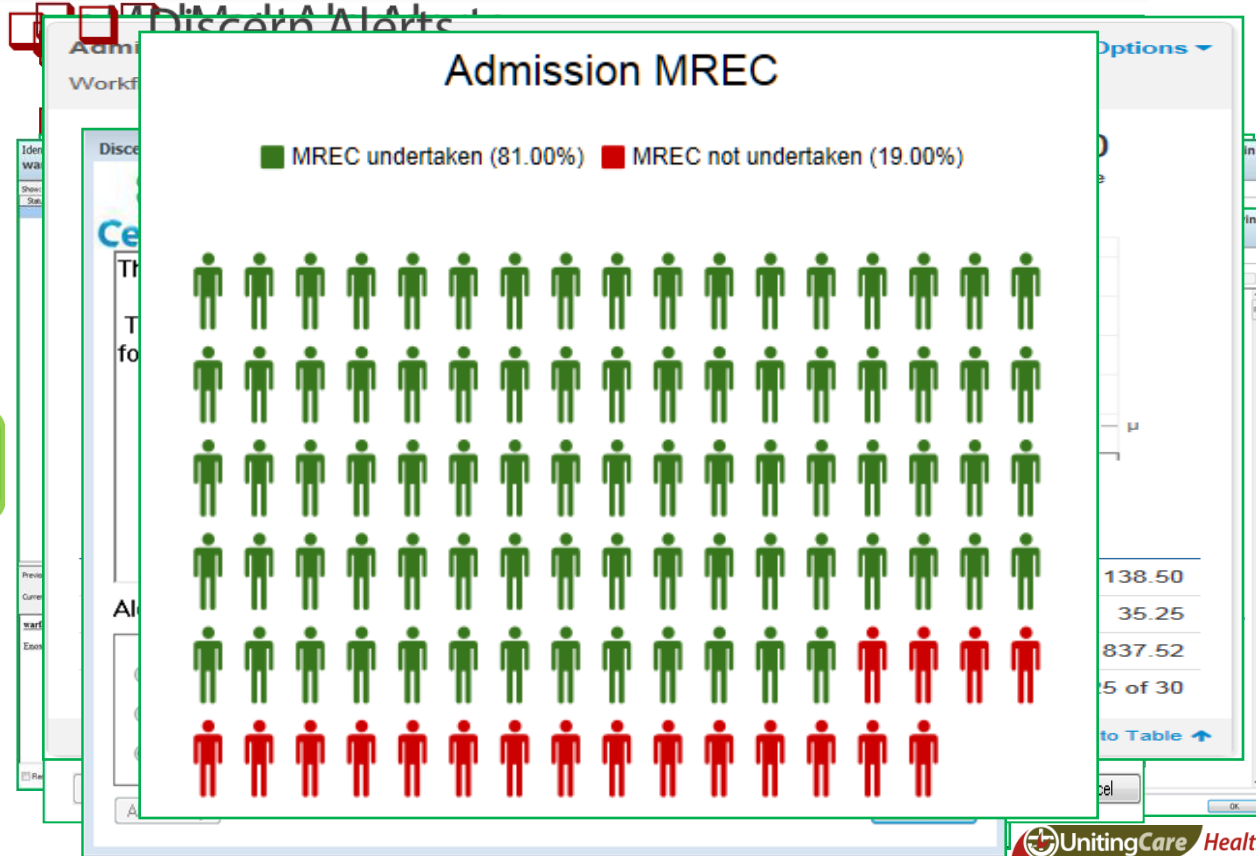
Computerised Provider Order Entry (CPOE)



Clinical Decision Support System (CDSS)



Medication Reconciliation (MREC)



Technology Enabled – Pharmacists

Interdisciplinary Dispensing Unit (ADU) Multi-Patient Dose Packaging (UDP)

- Reduction in medication inventory
- Control over inventory shrinkage and diversion
- Potential reduction in medication errors i.e. product selection errors
- Patient profiling = integration with CPOE
- Reduction in medication turn around time

Technology Enabled – Nurses

CareCompass Medication Administration Wizard (MAW)

Location	Patient	Visit	Care Team	QADOS	Activities
--	Brazer, Tyler Five 19yrs MALE - No Allergies Recorded	Lap Chole	Smith, Davidfive	--	
01 - Bed 1	BALMER, Jonathonone 34yrs MALE - Allergies	Chest Pain 4m 2w	Paul, Sharonone	0	█
02 - Bed 2	BALMER, Jonathonwo 34yrs MALE - Allergies	Chest Pain 4m 2w	Paul, Sharonone	0	█
02 - Bed 3	BALMER, Jonathonthree 34yrs MALE - Allergies	Chest Pain 4m 2w	Paul, Sharonone	0	█
04 - Bed 4	BALMER, Jonathonfour 34yrs MALE - Allergies	Chest Pain 4m 2w	Allen, Richardone	0	█
05 - Bed 5	BALMER, Jonathonfive 34yrs MALE - Allergies	Chest Pain 4m 2w	Allen, Richardone	0	█
06 - Bed 6	HAYS, Ebonyone 48yrs FEMALE - Allergies	Nausea/Vomiting/Dehydration 4m 2w	Allen, Richardone	1	█
07 - Bed 7	HAYS, Ebonytwo 48yrs FEMALE - Allergies	Nausea/Vomiting/Dehydration 4m 2w	Allen, Richardtwo	1	█
29 - Bed 29 Penop	BRAZIER, Davidone 59yrs MALE - Allergies	Laparoscopic Cholecystectomy 4m 2w	Smith, Davidone	0	█
31 - Bed 31	BRAZIER, Davidthree 59yrs MALE - Allergies	Laparoscopic Cholecystectomy 4m 2w	Smith, Davidthree	1	█
32 - Bed 32	BRAZIER, Davidthwo 59yrs MALE - Allergies	Laparoscopic Cholecystectomy 4m 2w	Smith, Davidthwo	4	█
32 - Bed 32	BRAZIER, Davidfour 59yrs MALE - Allergies	Laparoscopic Cholecystectomy 4m 2w	Smith, Davidfour	3	█
32 - Bed 32	BRAZIER, Davidthve 59yrs MALE - Allergies	Laparoscopic Cholecystectomy 4m 2w	Smith, Davidthve	2	█

Activity Timeline

Overdue 18:00 19:00 20:00 21:00 22:00 23:00 00:00 01:00 02:00 03:00 04:00 05:00

HRN: 00017965 DOB: 14/12/1975
MRN: 03794336 Age: 39 years

Details Result

100 mg = 1 tab(s), PO, Form: tab, First Dose: 02/01/15 12:00:00, Prod...

40 mg, PO, Form: tab, First Dose: 02/01/15 12:00:00, Prod...

300 mg, PO, Form: tab, First Dose: 02/01/15 12:00:00, Pro...

300 mg, PO, Form: tab, First Dose: 02/01/15 12:00:00, Pro...

BCMA led to decreased time on medication administration and increased time on direct patient care in ICU

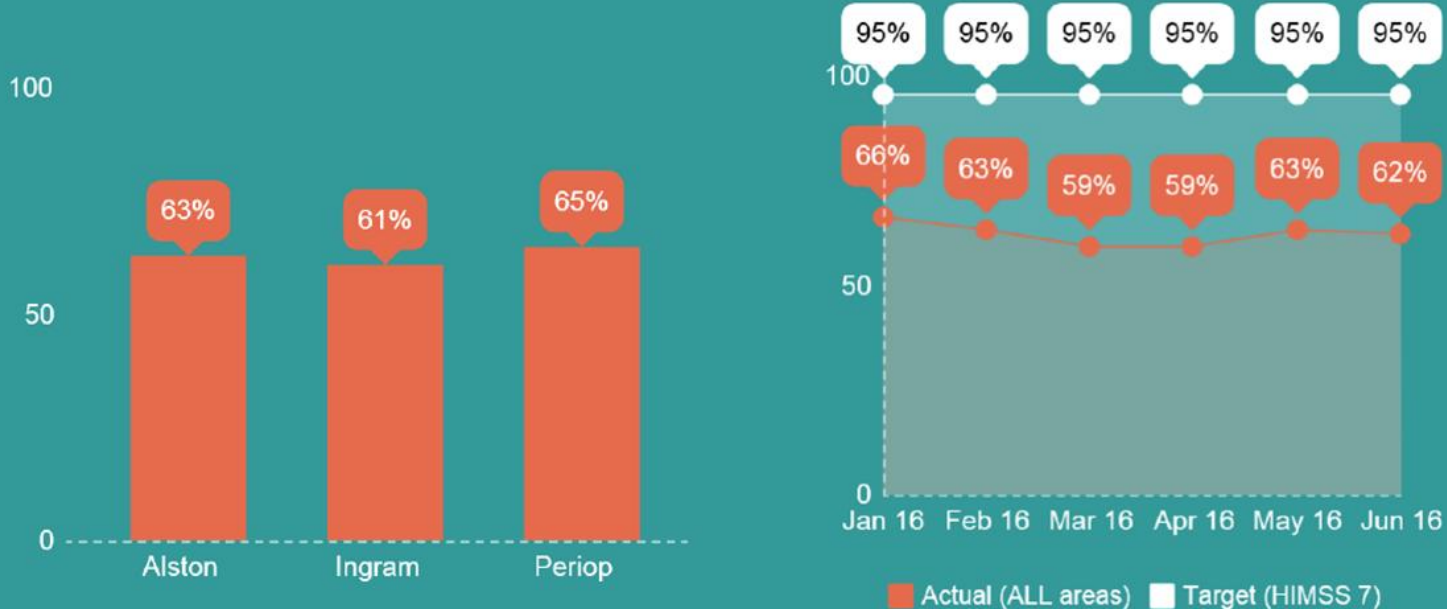
Medication errors ↓58%, but timing errors did not change significantly

Journal of Health Care

Patient Safety and Clinical Outcomes

SSHB BCMA trends → HIMMS 7 = 95%

Invalid Medication Omissions
Bar Code Med Administration (BCMA)
% medication administrations with a +ve patient AND med bar code scan



THANK YOU

