



What's Next: The Power of A Smart Solution Incorporated with Electronic Bed Panel and Smart Vital Signs app leading beneficial change to HA hospitals

APEHRC 2019

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HOIT&HI



REGISTRATION CLERK

DATE: 10/15/18
TIME: 11:00 AM
PATIENT: J. SMITH
ROOM: 101

NAME: J. SMITH
DOB: 01/15/1985
SEX: M
AGE: 33

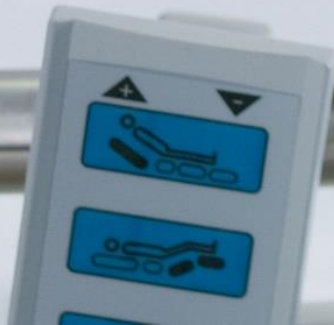
ADMISSION: 10/15/18
DISCHARGE: 10/16/18
STATUS: Admitted

PHYSICIAN: Dr. J. Doe
NURSE: N. Green
DIAGNOSIS: Chest Pain

CHIEF COMPLAINT: Chest pain
HISTORY OF PRESENT ILLNESS: Patient reports onset of chest pain at 10:00 AM, described as a pressure or squeezing sensation, radiating to the left arm and jaw.

PHYSICAL EXAM: Vitals stable, no acute abnormalities noted.

By: [Signature]
Nurse: [Signature]
Physician: [Signature]
Date: 10/15/18





Overview

- Our everyday in ward
- Launched Electronic Bed Panel app and Smart Vital Signs app in Hospital Authority
- Developed the Smart Solution
- What's next

Our everyday...



F6 Ward Daily Routine List

Date: 19/11

Bed no.	BP/P	T°	SaO ₂	I/O	BGA	Others
1A	Q4H Q20		Q20			
1	Q4H	Q4H	Q4H	✓	TDS	
2	Q4H		Q4H	2/✓	Q4H	
3	Q4H		Q4H	✓		
4	Q10	Q4H	Q10	✓	B. Brewer / S/S 12/16	
5	Q4H		Q4H		TDS	
6	Q4H		Q4H	✓		
7	Q4H		Q4H	✓		
8	Q4H					
9	Q4H					
10	Q4H	Q4H				

FREQUENCY

DATE: 19/11

TIME: 7:10/19/16

EYE OPENING (Please '✓' where appropriate)

Spontaneous	4	✓
To Speech	3	✓
To Pain	2	✓
None	1	

BEST VERBAL RESPONSE (Please '✓' where appropriate)

Oriented	5	✓
Confused	4	✓
Inappropriate	3	✓

Date : _____ Time : 1000

Bed No.	BP	P	SaO2	Temp
1A	103 / 105	61	99	
2A	140 / 69	75	99	
2	145 / 76	85	97	
3	159 / 99	23	74	
2A	147 / 67	57	98	
4A	110 / 65	55	99	
5	111 / 59	83	95	
6	165 / 66	102	96	
6A	134 / 59	80	96	

[illegible]

Bed no.	BP/P	T°	SpO ₂	I/O	BGA	Others
1A	Q4H Q20		Q20			
1	Q4H	Q4H	Q4H	✓	TDS	
2	Q4H		Q4H	2/✓	Q4H	
3	Q4H		Q4H	✓		
4	Q10	Q4H	Q10	✓	B. brewen/	5/5/16
5	Q4H		Q4H		TDS	
6	Q4H		Q4H	✓		
7	Q4H		Q4H	✓		
8	Q4H					
9	Q4H					
10	Q4H	Q4H				

FREQUENCY	
DATE	8/11
TIME	7:10 / 9:15

Glasgow Coma Scale (GCS)

EYE OPENING (Please '✓' where appropriate)	
Spontaneous	4
To Speech	3
To Pain	2
None	1

BEST VERBAL RESPONSE (Please '✓' where appropriate)	
Oriented	5
Confused	4
Inappropriate	3
Incomprehensible	2
None	1

BEST MOTOR RESPONSE (Please '✓' where appropriate)	
Obeys Commands	6
Localizes Pain	5
Withdraws from Pain	4
Abnormal Flexion to Pain	3
Extension to Pain	2
None	1

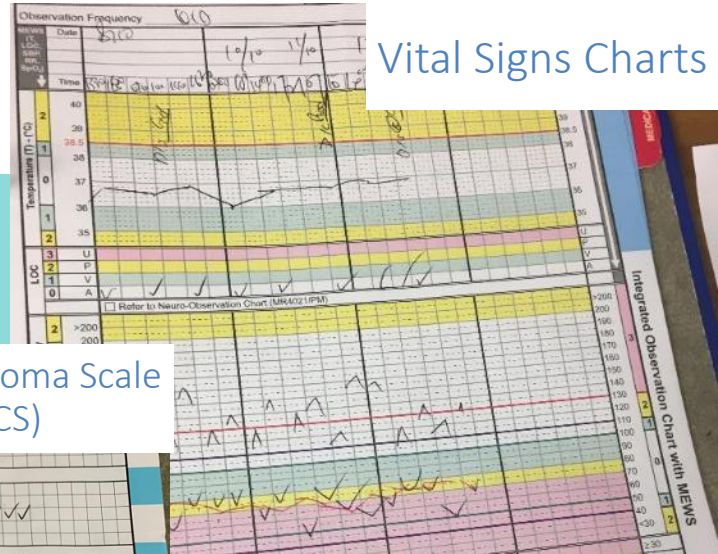
GCS SCORE (TOTAL) 11 + 4 + 5 = 20

PUPILS SIZE (Please '✓' where appropriate)	
Right	o 1 mm
	o 2 mm
	o 3 mm
	o 4 mm
	o 5 mm
	o 6 mm
Left	o 1 mm
	o 2 mm
	o 3 mm
	o 4 mm
	o 5 mm
	o 6 mm

GHT REACTION (Reactive = "+" Non-reactive = "-" Swollen eyelids = "S" Cataract = "C")

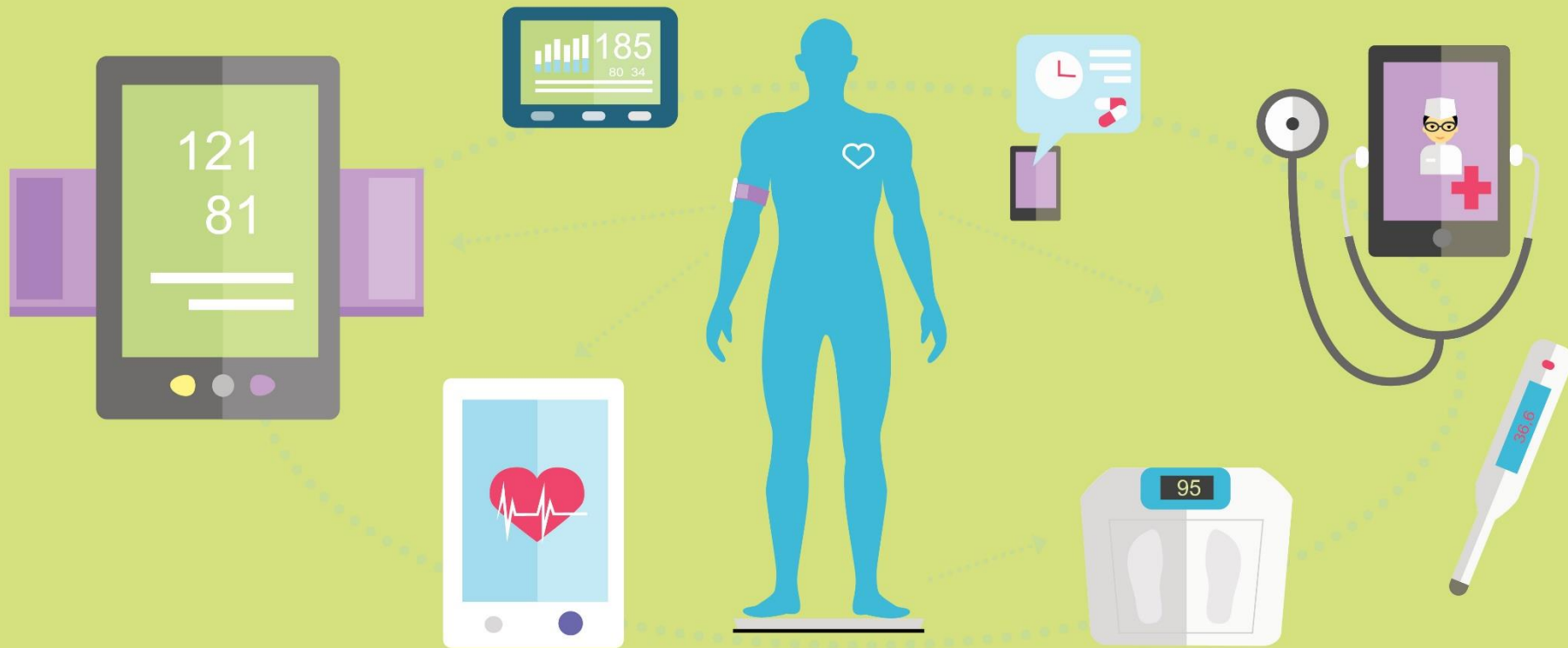
Right	Left
+	+

CONVERSION OF GCS SCORE TO MEWS	
GCS Score	MEWS
15	0
14	1
9 - 13	2
< 9	3



Blood Glucose

Why are interfaced and integrated workflow of Bed Panel and Vital Signs so important ?





Avoid duplication of works

Developed in late 2017

- Electronic Bed Panel and Vital Signs app
- Launched in 2019 (Piloted in M&G, Surgical, NICU, PICU, SCBU, Renal, Mixed specialty ward, etc)



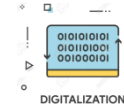
Smart

Bed Panel & Vital Signs



Vital Signs

D **A** ta Digitalization



A uto Charting



A uto Scoring

MEWS / PEWS /
GCS / BMI



A lert



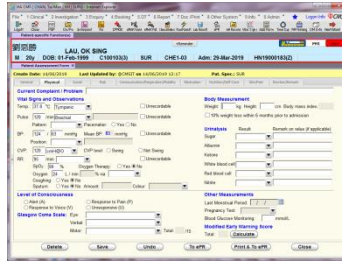
Sh **A** rable

Corporate Enquiry
iPad / CMS / Bed Panel



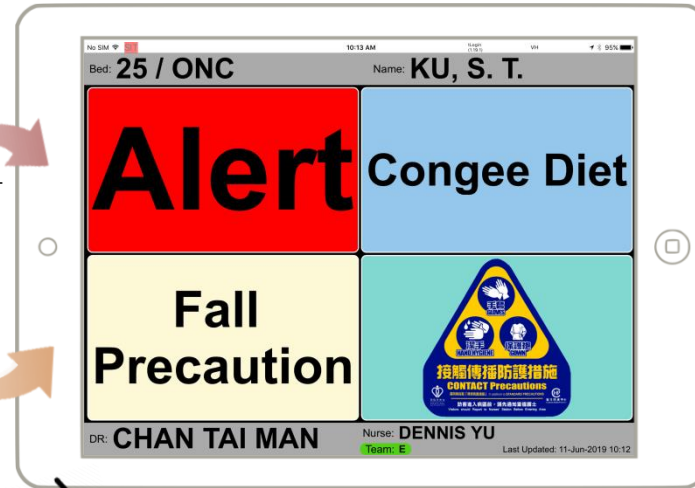
Bed Panel

Integrated with CMS



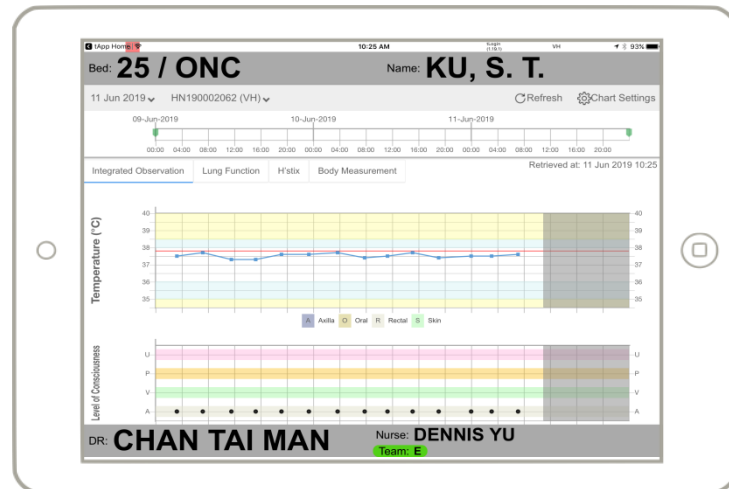
Corp Alert

PAF

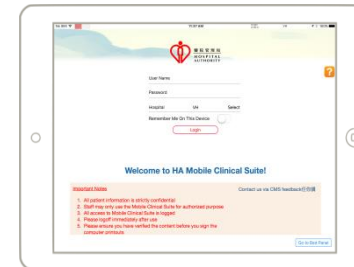


Swipe For More...

1. Vital Signs Charts



2. Bedside Patient Record



Radiology Result



Lab Result



Patient Album



IPMOE

Smarter Patient Selection

With Bed Panel
Smart Patient Selection

Current

Wristband



Patient List

Bed	English Name	Episode	Spec	(C) Admission Date/Time	Bed/age
01	LO, SAI PAU	HV190001818	ONC	3 28-Mar-2018 10:10	F39y
02	KYONG, BHAN BHAN	HV190001811	ONC	3 28-Mar-2018 10:18	F28y
03	LAU, OK BING	HV190001812	ONC	3 28-Mar-2018 10:24	M20y
04	NG, KUN HONG	HV190001840	ONC	3 28-Mar-2018 10:35	M49y
05	CH, GUANG CHAN	HV190001810	ONC	3 28-Mar-2018 10:56	U85y
06	KHAK, PUK SE	HV190001817	ONC	3 28-Mar-2018 11:15	U85y
07	TEANG, PUK FA	HV190001812	ONC	3 28-Mar-2018 11:21	F39y
08	LEUNG, SHU LAU	HV190001800	ONC	3 28-Mar-2018 11:48	F28y
09	LAI, PING KOO	HV190001811	ONC	3 28-Mar-2018 11:53	M20y
10	CHAI, WU LEE	HV190001802	ONC	3 28-Mar-2018 11:56	M49y
11	JU, KU WOO	HV190001810	ONC	3 28-Mar-2018 12:00	U85y
12	KAU, PO YAU	HV190001821	ONC	3 28-Mar-2018 14:33	F39y
13	MO, YUK PUI	HV190001831	ONC	3 28-Mar-2018 14:57	F28y

Tab to Select



Scan Smart QR Code

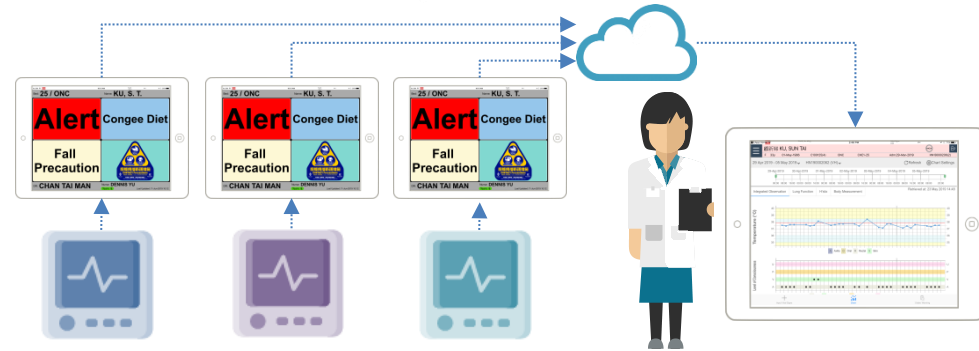


Coming Soon...

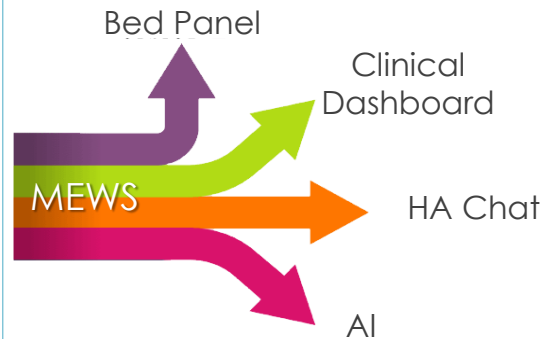
Fast Logon



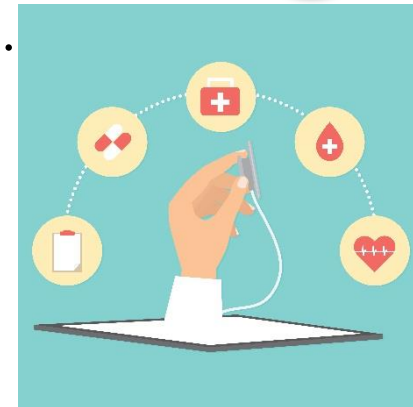
Continuous Monitoring



Clinical Alerts & Pathway

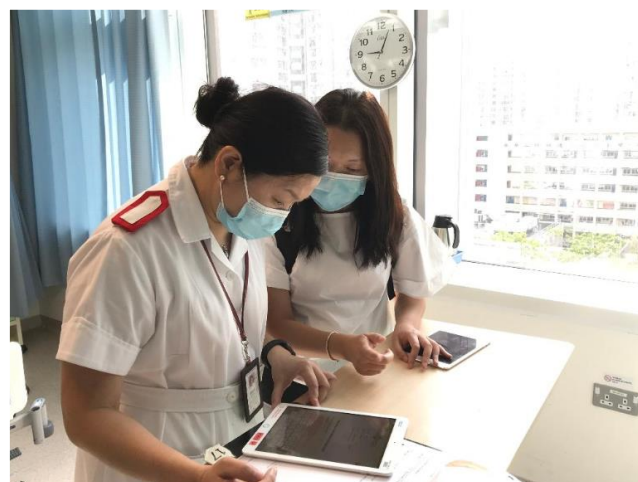


More...



The first dual pilot: TSWH Mix Specialty Ward

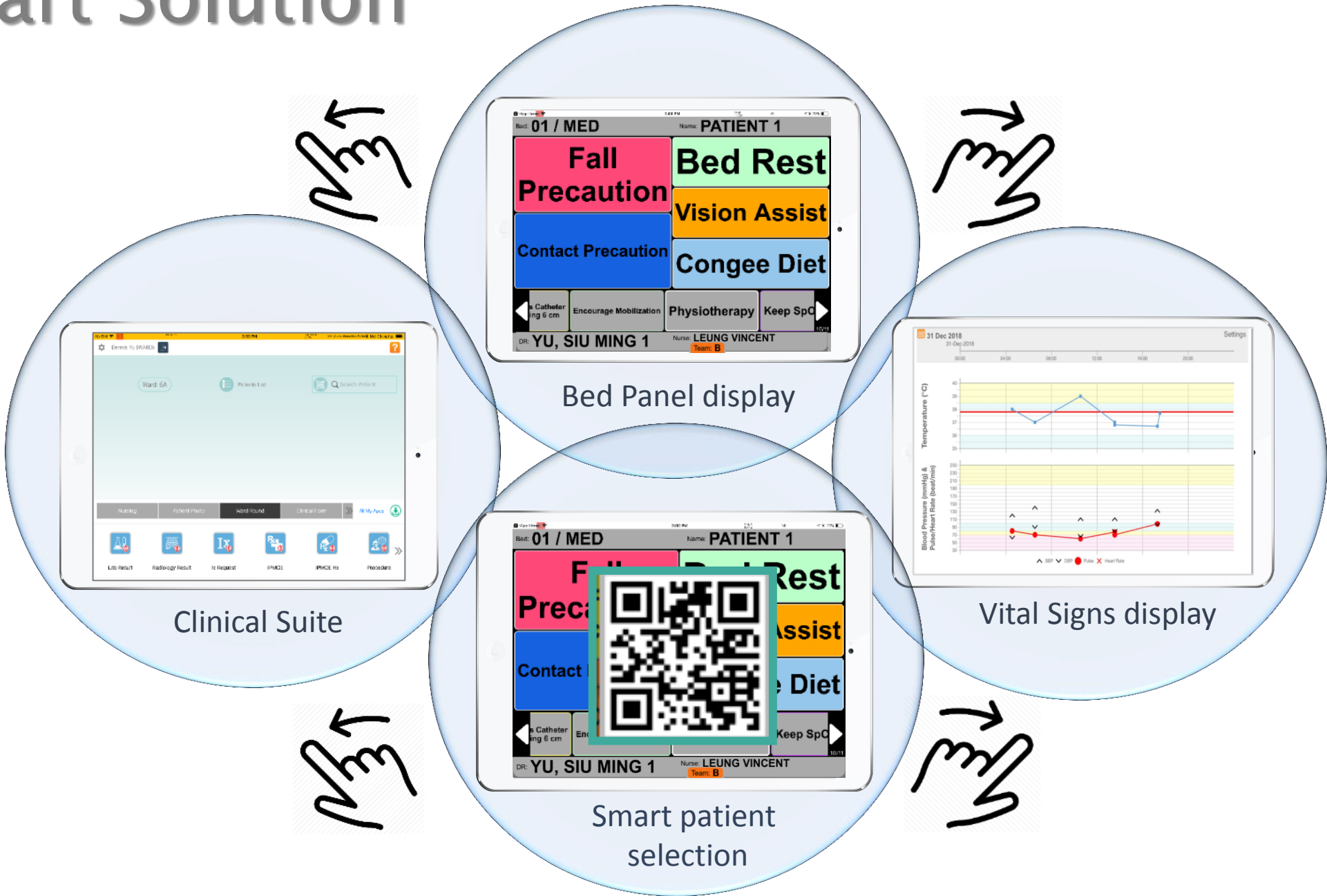
9 Oct 2019



Auto Charting

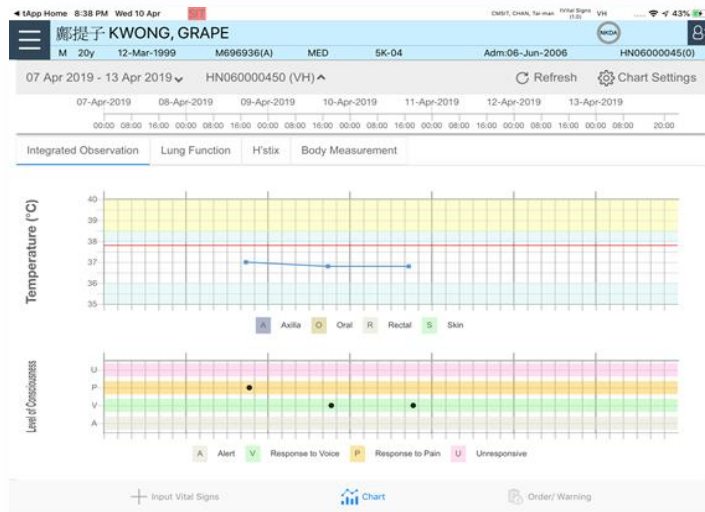


Smart Solution

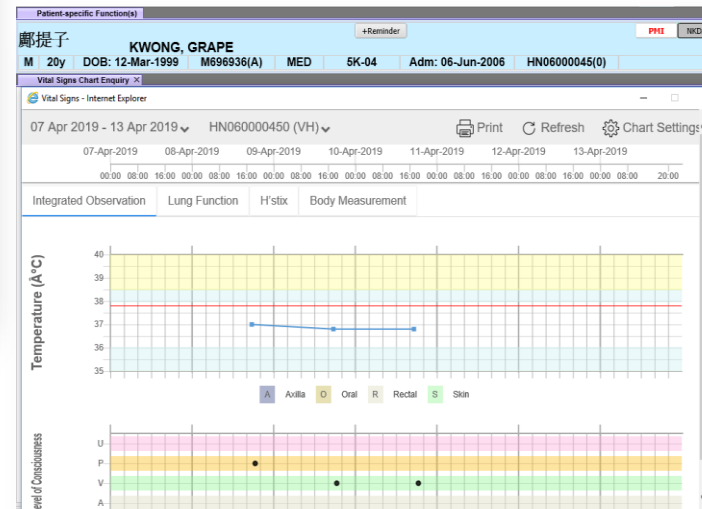


View Anywhere Anytime : (across hospitals and episodes)

iPad (Shared / 1D1P)



CMS Workstation



Electronic Bed Panel



Challenge: detailed workflow study
before implementation



A photograph of a smiling elderly man with grey hair, wearing a light blue hospital gown, being attended to by two healthcare professionals in white coats. The woman on the left is smiling at the camera, while the woman on the right is seen from the back, looking at the man. The background is a bright, clinical setting.

Benefits

- Update anywhere anytime
- Provide Worklist at point of care
- Facilitate timely and accurate data entry
- Digitalize vital signs data and frequencies
- Reduce duplication of work and transcription error

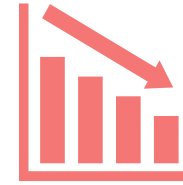
A background image showing medical professionals in a clinical setting. On the left, a doctor in a white coat with a stethoscope around their neck is pointing at a tablet. In the center, a nurse in blue scrubs is holding the tablet. On the right, another medical professional in a white coat is partially visible. The image is overlaid with a semi-transparent blue rectangle containing text.

Way Forward

- Bed Panel as bedside terminal (communicate with carer)
- Integrate with other CMS functions
- Clinical alerts & pathways
- Data driven algorithm



VS Data driven algorithm



Trend analyze



Predictive analytics

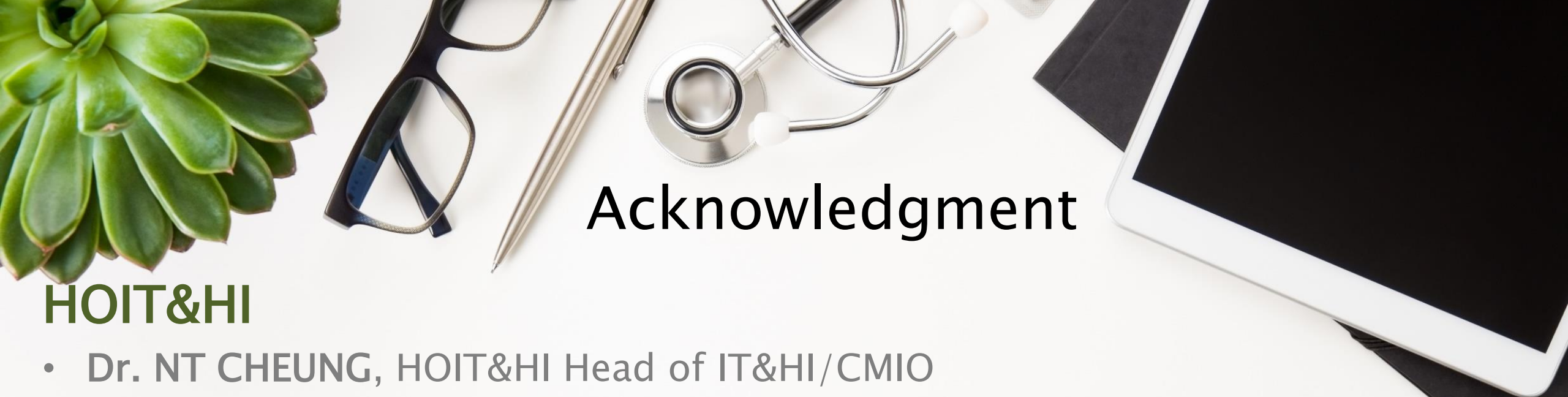


Proactive assessment

Thank

You





Acknowledgment

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