

Humanity in Healthcare

Putting the Person back in Personnel

Prof Lee Chien Earn & Dr Syahid Hassan, PhD
17 Sep 2019



Changi
General Hospital
SingHealth

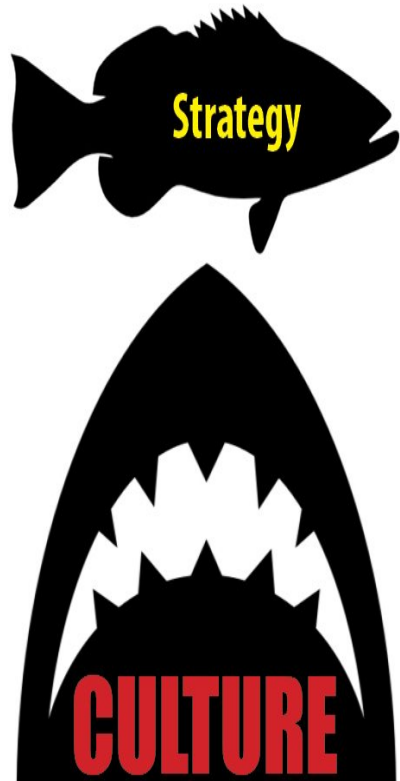


Eliminating ~~Human~~ Error

Part of the
 Problem
 Solution



HUMANS AS PART OF THE PROBLEM

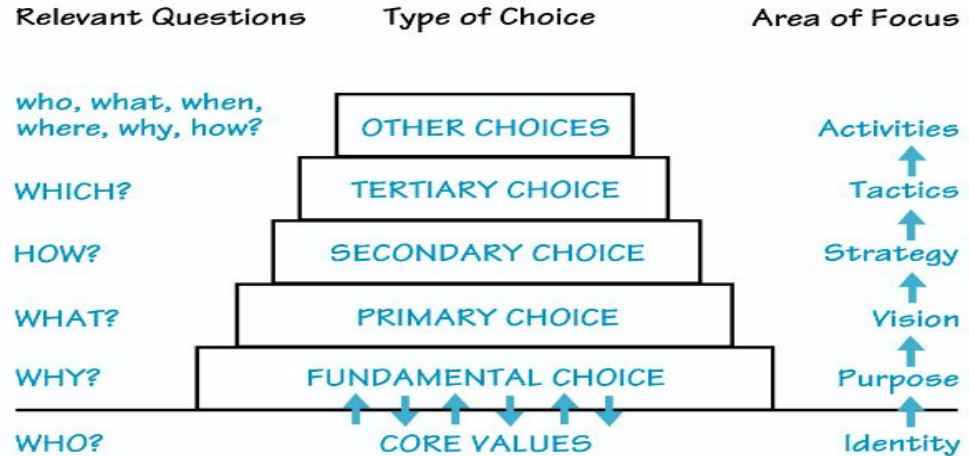


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HUMANS AS PART OF THE SOLUTION



“The source of energy at work is not in control, it is in connection to purpose.”



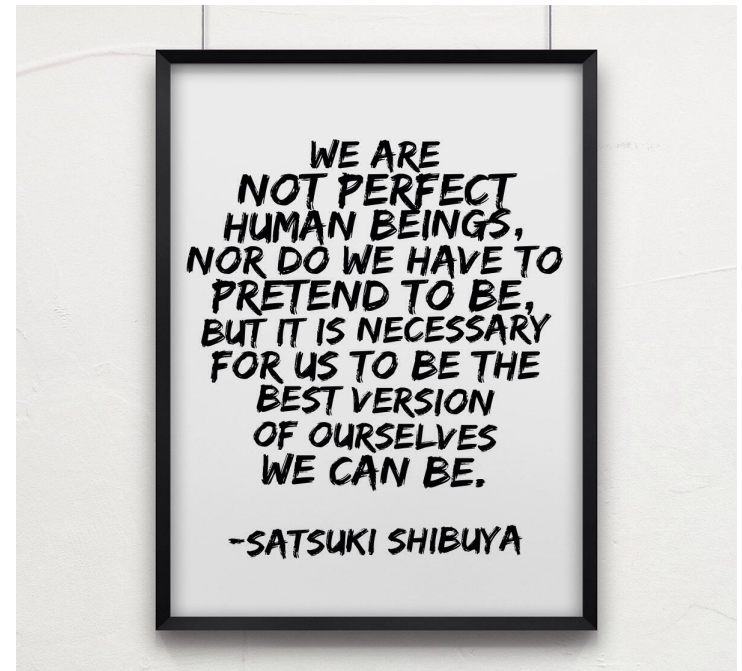
Comprehensible, Manageable and Meaningful

PURPOSE

Our Mission

To deliver the BEST patient care with passion and empathy

- A choice and commitment
- Learn, Unlearn, Relearn



JUST AND LEARNING CULTURE

Organization has a responsibility to employees (and ultimately to patients)

Staff accountable for the quality of choices they make regardless of the outcome

Shared Accountability

SAFE SYSTEMS



SAFE CHOICES



RELIABLE OUTCOMES



ENABLED BY GOOD HUMAN-CENTERED DESIGN

Just Culture and Human Error

Reckless Behavior:

Knows the act is unsafe and unjustifiable, but does it anyway

Deter and do not tolerate

At-Risk Behavior:

Unsafe act mistaken to be safe and justifiable

Coach back to safe act
Design to disincentives

Slips, lapses and mistakes
despite safe choices

Design to minimize or mitigate

A learning culture throughout the organization

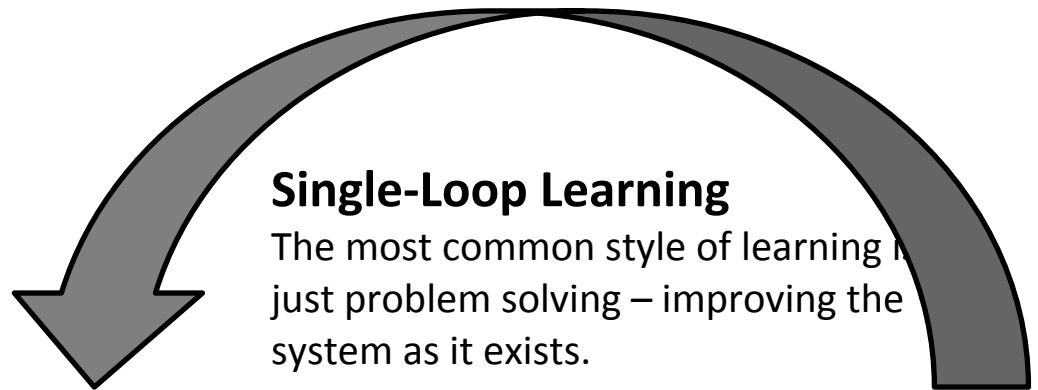
Sources:
Just Culture (Outcome Engenuity)
Enterprise Risk Management Handbook for Healthcare Entities (2nd Edition), American Health Lawyers Association

PSYCHOLOGICAL SAFETY

- Define Assumptions
- Examine Assumptions
- Challenge Assumptions

Single-Loop Learning

The most common style of learning is just problem solving – improving the system as it exists.



Assumptions
Why We Do What We Do



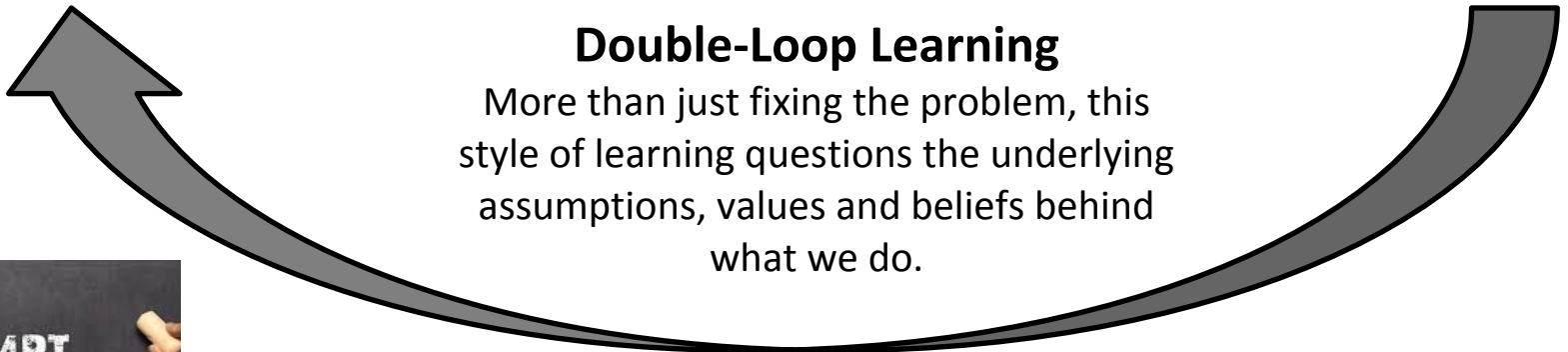
Strategies and Techniques
What We Do



Results
What we Get

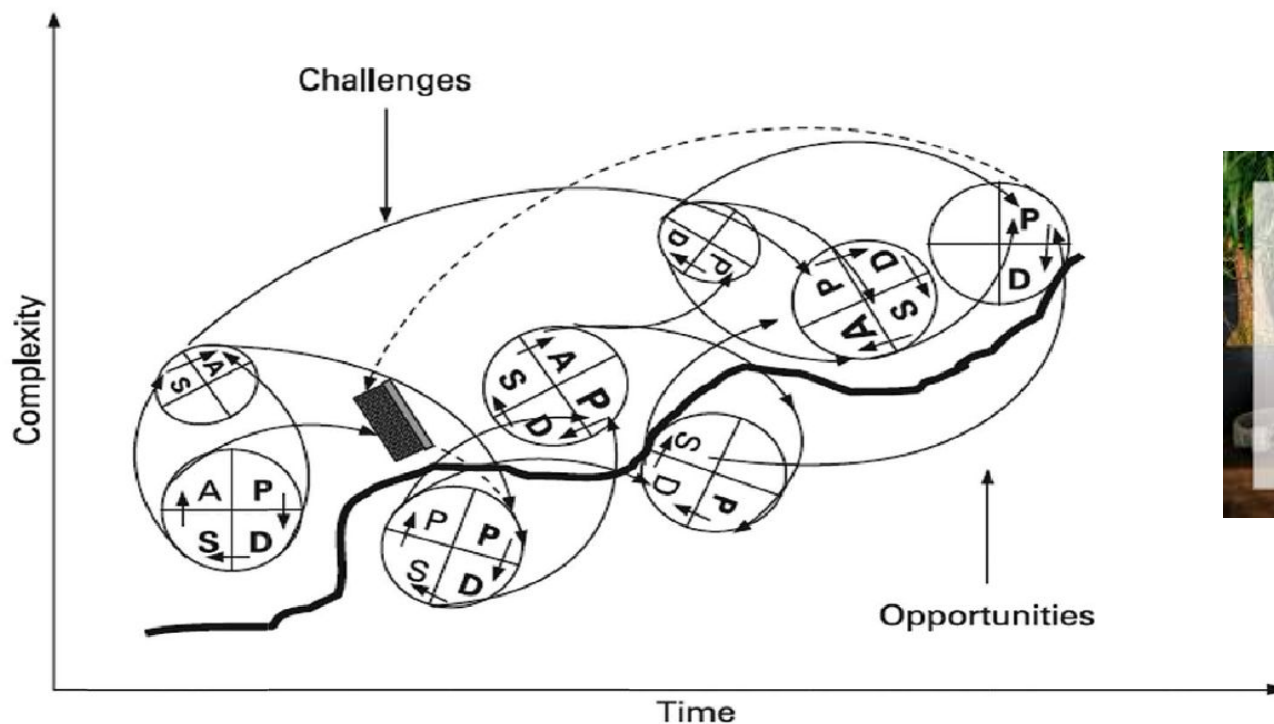
Double-Loop Learning

More than just fixing the problem, this style of learning questions the underlying assumptions, values and beliefs behind what we do.

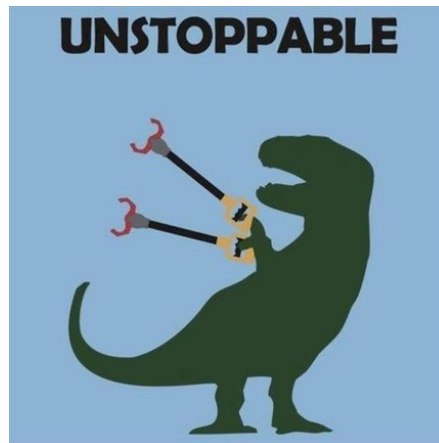


FOCUS ON LEARNING, NOT PERFECTION

Learning Organisations are places “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together.”



WHAT HUMAN FACTORS IS



Create **good “fit”** between the human and system based on an understanding of the **interaction between system design and human abilities & limitations**

SAY OUT THE COLOURS OF THE WORDS

TASK AIM: Before the mic drops, say out the colours of the words in the black boxes, from top to bottom

Say

“green”

“blue”

“red”

PRACTICE
E

HAS

ICON

POLAR



SAY OUT THE COLOURS OF THE WORDS

TASK AIM: Before the mic drops, say out the colours of the words in the black boxes, from top to bottom

**TEST No.1:
READY?**

FLIP

STUNT

CAP

IMPORT

NICE



SAY OUT THE COLOURS OF THE WORDS

TASK AIM: Before the mic drops, say out the colours of the words in the black boxes, from top to bottom

**TEST No.2:
READY?**

RED

YELLOW

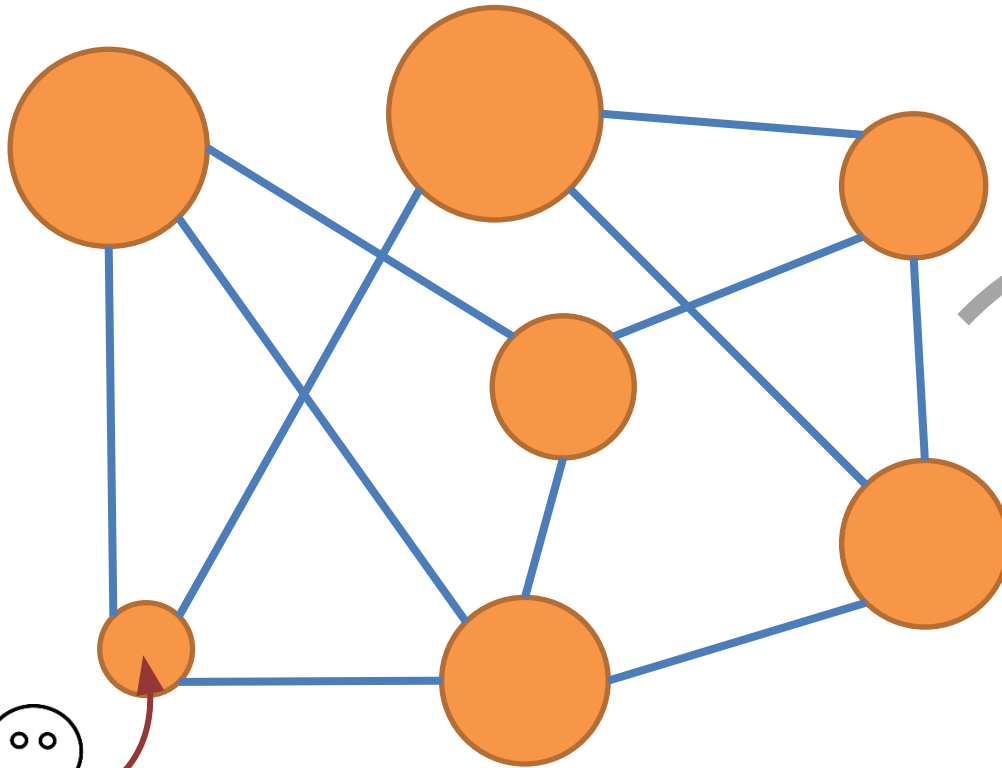
PURPLE

GREEN

BLUE



SYSTEMS THINKING



OUTCOM

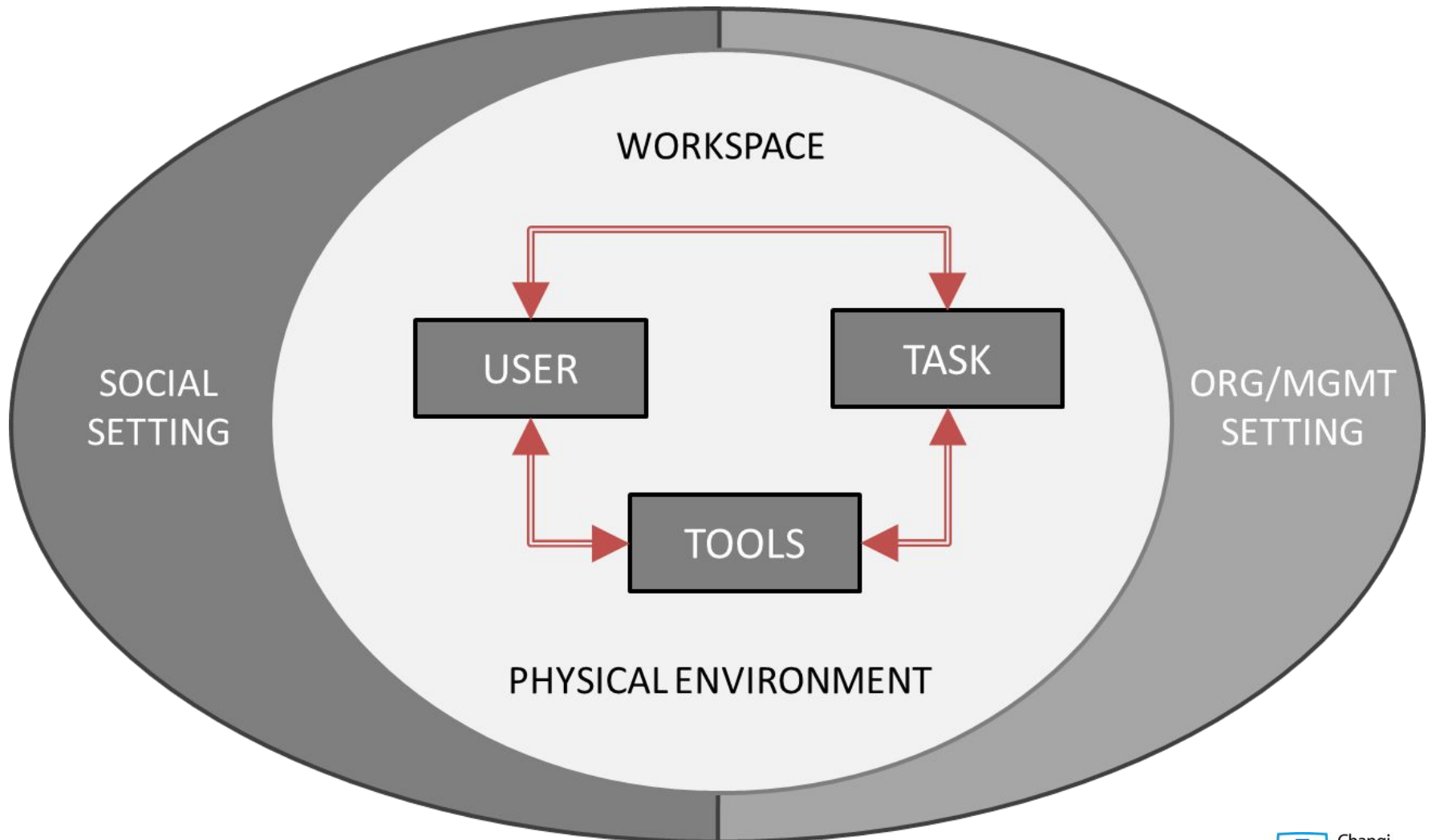
Every system is perfectly designed to get the results it gets



HUMAN

Goals, Needs,
Abilities & Limitations

SOCIO-TECHNICAL SYSTEM THINKING



PATIENT-CENTERED COMMUNICATION DESIGN



PATIENT FOOD CHARTING GUIDE

Chart Diet Accurately

- Carbohydrate (NT, ¼, ½, ¾, 1 Share)
- Meat (NT, ¼, ½, ¾, 1 Share)
- Vegetable (NT, ¼, ½, ¾, 1 Share)

Patient Eaten	Not Taken (NT)	Eaten 1/4 Share	Eaten 1/2 Share	Eaten 3/4 Share
CARROT CAKE		Eaten ¼ CARROT CAKE 	Eaten ½ CARROT CAKE 	Eaten ¾ CARROT CAKE
CHEE CHEONG FUN (RICE NOODLE ROLL)		Eaten ¼ CHEE CHEONG FUN 	Eaten ½ CHEE CHEONG FUN 	Eaten ¾ CHEE CHEONG FUN
WAFFLE/ PANCAKE		Eaten ¼ WAFFLE/ PANCAKE 	Eaten ½ WAFFLE/ PANCAKE 	Eaten ¾ WAFFLE/ PANCAKE

“Match the real world” visual design facilitate accurate communication and charting of food consumption

Credit: CGH Dietetic Consultation



STAFF-CENTERED DECISION AID DESIGN

Goal: To keep Blood Sugar > 4mmol/l

Date: _____ Time: _____

Not on NBM / Patient conscious		N
Give either		
<input type="checkbox"/> 60ml of Trutol® (oral glucose solution) OR <input type="checkbox"/> Simple carbohydrate i.e. 3 teaspoons of sugar <input type="checkbox"/> Check H/C 15mins later		

H/C is still < 4mmol/L	N
<input type="checkbox"/> Repeat 60ml of Trutol® <input type="checkbox"/> Re-check H/C 15mins later	

H/C ≥ 4mmol/L	N
Serve either one of the following	
<input type="checkbox"/> During meal times : meal that is due <input type="checkbox"/> Between meal times : 15g of complex carbohydrate → 3pcs of crackers or → 1 slice of bread <input type="checkbox"/> Check with doctor to review medications (insulin/OHGA) <input type="checkbox"/> Re-check H/C 2hrs later If H/C is ≥ 4mmol/L continue with the routine H/C monitoring	

H/C is still < 4mmol/L	D	N
<input type="checkbox"/> Inform Doctor at _____ hrs <input type="checkbox"/> Doctor reviewed at _____ hrs <input type="checkbox"/> IV Dextrose 50% 20ml Serve either one of the following <input type="checkbox"/> During meal times : meal that is due <input type="checkbox"/> Between meal times : 15g of complex carbohydrate → 3pcs of crackers or → 1 slice of bread <input type="checkbox"/> Re-check H/C 15mins later till capillary blood sugar > 4mmol/L <input type="checkbox"/> Check with doctor to review medications (insulin/OHGA) <input type="checkbox"/> Re-check H/C 2hrs later If H/C is ≥ 4mmol/L continue with the routine H/C monitoring		

H/C ≥ 4mmol/L	N
Serve either one of the following	
<input type="checkbox"/> During meal times : meal that is due <input type="checkbox"/> Between meal times : 15g of complex carbohydrate → 3pcs of crackers or → 1 slice of bread <input type="checkbox"/> Check with doctor to review medications (insulin/OHGA) <input type="checkbox"/> Re-check H/C 2hrs later If H/C is ≥ 4mmol/L continue with the routine H/C monitoring	

<input type="checkbox"/> Primary Team to review cause of hypoglycaemia and optimize OHGA/insulin	D	N
<input type="checkbox"/> Refer Diabetic Nurse Educator for patient education and counseling		
<input type="checkbox"/> Refer endocrinologist (if persistent/recurrent hypoglycaemia)		
<input type="checkbox"/> Refer Dietitian		

DOCTOR I/C	NURSE I/C
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* If patient becomes unconscious at any one point, Inform Doctor Start NBM / Patient unconscious pathway

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Patient Conscious & Not on NBM

IMMEDIATE ACTIONS GOAL: Keep Capillary Blood Glucose (CBG) ≥ 4mmol/L

Date: _____

Registered Nurse who initiated form:
Name & Initial: _____

CBG CHECK Number	Time	CBG Reading	Hypoglycaemia	Normal
			If CBG 3.9 or less mmol/L	If CBG 4.0 or more mmol/L
1 st CBG		1 ST mmol/L	<input type="checkbox"/> Set A Check CBG 15 mins later	Not Applicable
2 nd CBG		2 ND mmol/L	<input type="checkbox"/> Set A Check CBG 15 mins later	<input type="checkbox"/> Set B
3 rd CBG & ABOVE*		3 RD mmol/L	<input type="checkbox"/> Set C Check CBG 15 mins later Run "Set E": IV Dextrose 10% Infusion** first (1 pint over 8 hr) while awaiting for IV Bolus D50% ** For Stroke Pathway patients, run IV D/S infusion first (1 pint over 8 hr) while awaiting for IV Bolus D50%	<input type="checkbox"/> Check CBG 1 hour (hr) later NOTE! Continue routine CBG check only after 2 consecutive readings ≥ 4mmol/L (Stable readings)

Set A

60ml Trutol® (oral glucose solution)

Set B

Either 3 pcs of crackers OR 1 slice of bread OR Normal meal if due within 1 hour

Set C

IV Bolus Dextrose 50% (D50%) 20ml

* Guideline charting not required from 4th check onwards
STOP GUIDELINE ONLY WHEN CBG LEVEL IS STABLE

For all NGT Patients only:
- If feed is due within the next 1 hr: > Bring forward the next feeding
- If feed is not due in the next 1 hr: > Give 120ml of Isoal & inform dietician that Isoal is given for hypoglycaemia rescue



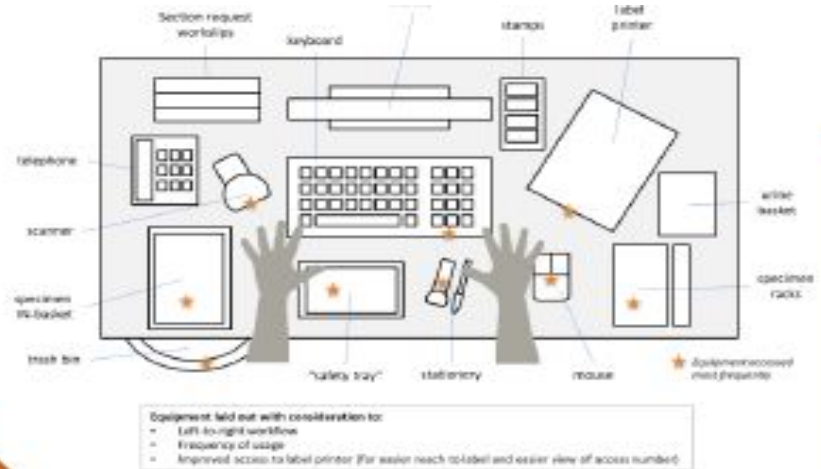
Information grouping and graphical design eases understanding of algorithm

Credit: CGH Hypoglycaemia Prevention Team

STAFF-CENTERED TASK & WORKDESK DESIGN



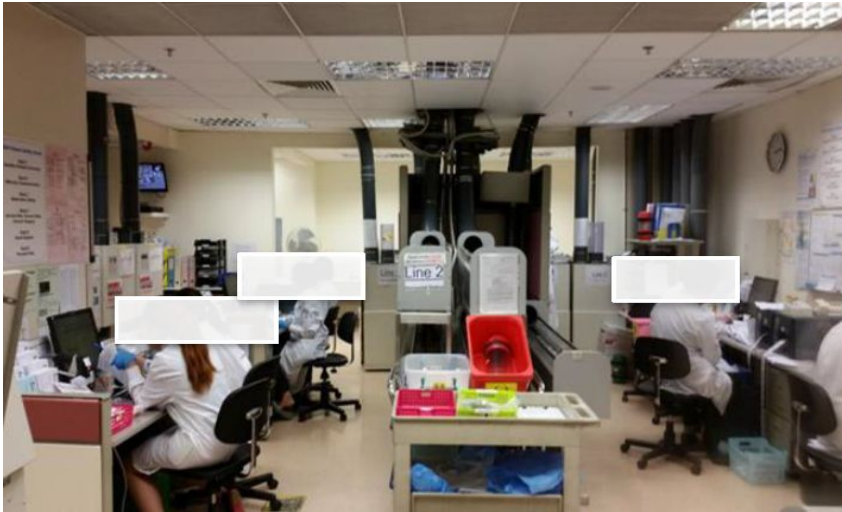
Old Processing desks



New Processing desks

Items placed to facilitate efficient flow of motions

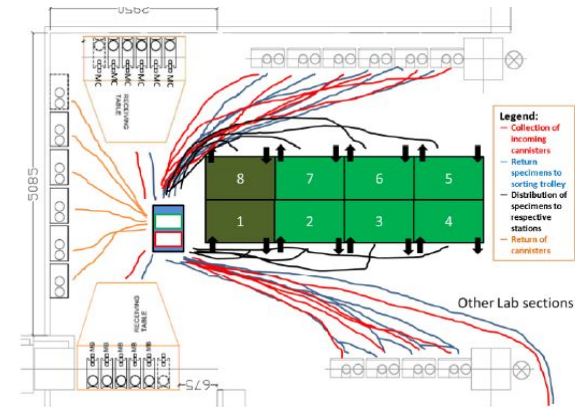
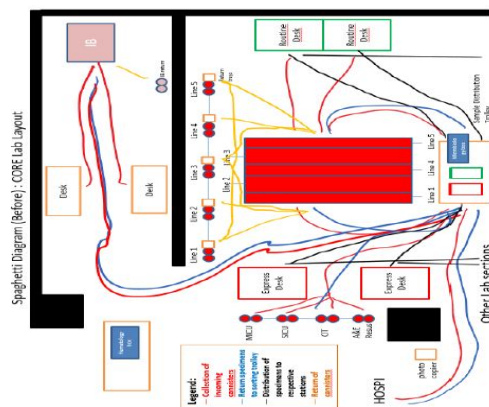
STAFF-CENTERED TEAMWORK & WORKSPACE DESIGN



Distributed outward facing desks



Clustered central facing desks



Credit: CGH Core Lab Processing Team

PATIENT-CENTERED MODEL OF CARE & SPACE DESIGN

Empowering patients to return to normalcy and wellness



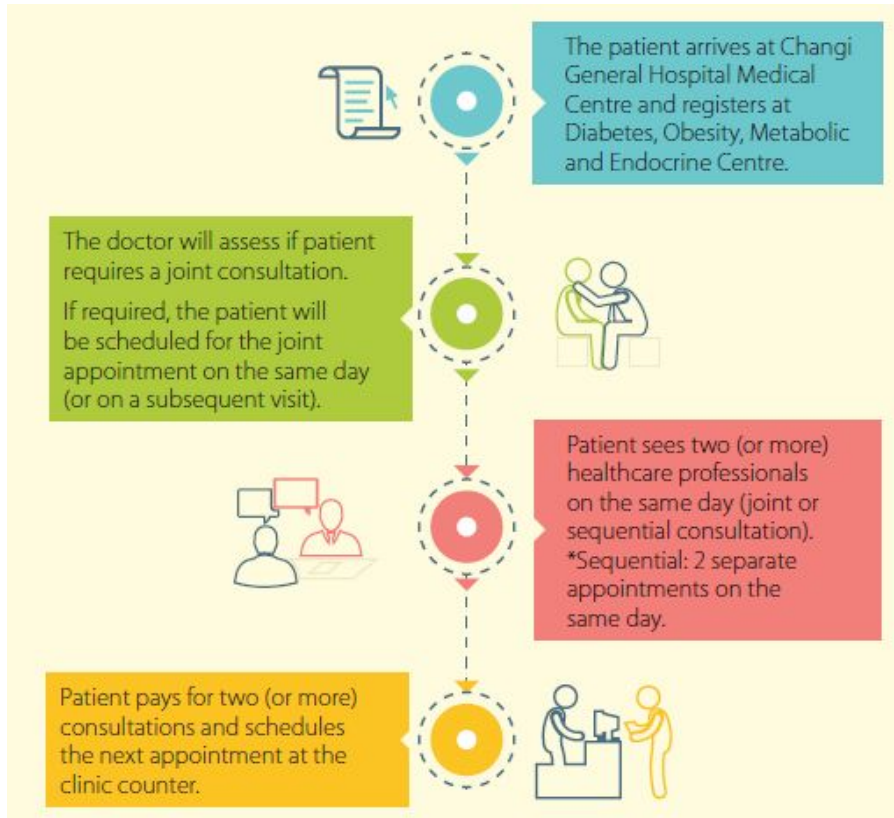
“Cluster housing” ward concept with common dining, family area and rehab to encourage interactivity and peer support amongst patients



Pre-discharge Rehab in mock-up HDB apartment

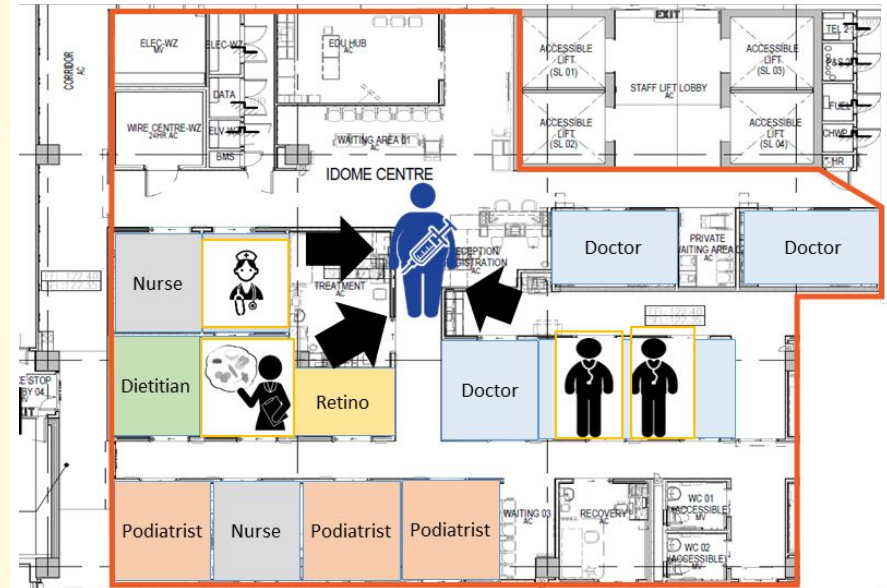
PATIENT-CENTERED MODEL OF CARE & SPACE DESIGN

Integrated Multi-Specialty Practice: One-Stop Centre for Patient



Aligned clinical protocol for same condition across specialties

Diabetes, Obesity, Metabolic and Endocrine Centre



Infrastructure design facilitates cross-corridor consultation and collaboration

Allows patient to experience integrated care, save travel time, receive diagnosis & treatment earlier

HUMAN-CENTERED SYSTEMS

