

Project Title

Improving The Care Of Patients In Our Diabetes Clinic

Project Lead and Members

Project lead: Cheng Yiling

Project members: Theodore Goh Hong Hui, Jason Kwan Chi Keong, Eldon Lee Chong Wai

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Medical, Allied Health, Healthcare Administration

Applicable Specialty or Discipline

Anaesthesiology, Optometry, Operations, Human Resource

Project Period

Start date: Jan-2019

Completed date: Jun-2019

Aims

Improve patient and staff experience in the Diabetes clinic with 3 prong approach. Come up with simple prototypes for issues we can tackle over a 2-month period. We used height and weight signages, educational videos to be played in clinic and a personalised diabetes health booklet which includes the clinic map

Background

See poster attached/ below

Methods

See poster attached/ below

Results

See poster attached/ below

Lessons Learnt

The team needs to engage stakeholders at all levels and get management support in this improvement initiative. A larger, more targeted survey questionnaire can be conducted to understand the patients profile better. Using human-centered approach is good to understand staff and patients' pain points so as to bring about an improved patient experience.

Conclusion

See poster attached/ below

Project Category

Care & Process Redesign, Quality Improvement, Design Thinking, Workforce Transformation, Informal Workforce Transformation, Patient

Keywords

Patient Experience, Human Centered, Diabetes Clinic

Name and Email of Project Contact Person(s)

Name: Cheng Yiling

Email: yiling_cheng@nuhs.edu.sg

IMPROVING THE CARE OF PATIENTS IN OUR DIABETES CLINIC

MEMBERS: CHENG YILING (ANAESTHESIA), THEODORE GOH HONG HUI (GROUP OPERATIONS), JASON KWAN CHI KEONG (OPTOMETRY), ELDON LEE CHONG WAI (HUMAN RESOURCE)

- SAFETY
- PRODUCTIVITY
- PATIENT EXPERIENCE
- QUALITY
- VALUE

Define Problem/Set Aim

Opportunity for Improvement

Patients
-empower them with knowledge rather than relying just on clinicians
-enable them to locate our services easily rather than feeling stressed and lost
-make their wait time more fruitful

Staff
-smoother workflow
-able to concentrate on looking after patients rather than being distracted by issues that can be solved with change in design

Quantify the problem:
-most patients do not know we have educational materials in clinic
-most patients do not keep a record of their main control monitoring parameters like blood pressure, sugar levels, HbA1c, height, weight and BMI.
-All patients interviewed did not know what HbA1c is.
-55% of all patients do not take their height and weight before seeing the doctor
-Most patients say wait times can be up to an hour or more beyond scheduled appointment times

Explain the cost of the problem:
-If there is less understanding and no personal record of their condition, patients may not feel empowered to be active in their management and may be unaware how to deal with emergencies pertaining to their chronic condition.
-This leads to significant delay and inefficiency as patients have to be reminded by staff or enter the consult room and leave again to do height and weight.
-Staff frustration and time taken away from real patient care and service

Define the scope:
Between Jan to Jun 2019, we embarked on a capstone project as part of our NUS-ISS Professional Diploma in Smart Health Leadership. Our focus was NTFGH specialist outpatient clinics and we were tasked to narrow our scope to the diabetes clinic for this project

Aim
Improve patient and staff experience in the Diabetes clinic with 3 prong approach. Come up with simple prototypes for issues we can tackle over a 2 month period. We used height and weight signages, educational videos to be played in clinic and a personalised diabetes health booklet which includes the clinic map

Establish Measures

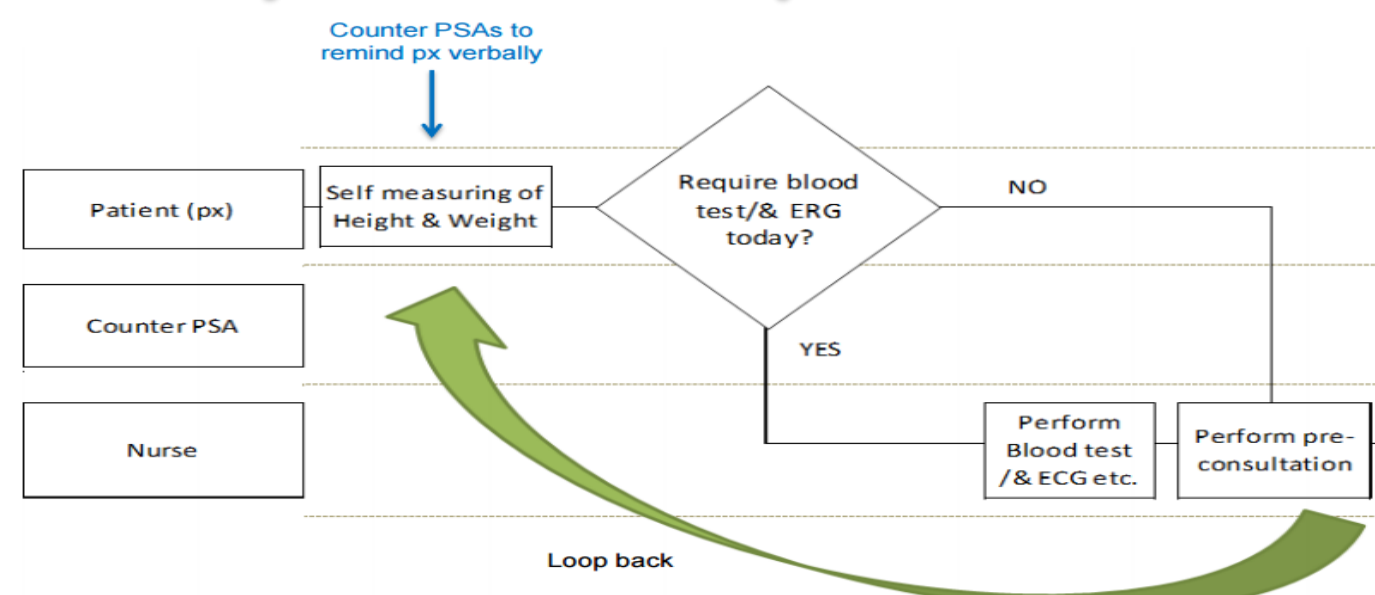
What is your current performance?

We observed that through our human centered research that
Patients
-would like to know how to manage their condition better
-current educational material in clinic not very engaging / interesting
-difficulty finding location of the rooms in clinic
-long wait time in clinic
-most patients do not know we have educational materials in clinic
-most patients do not keep a record of their main control monitoring parameters like blood pressure, sugar levels, HbA1c, height, weight and BMI.
-All patients interviewed did not know what HbA1c is.
-55% of all patients do not take their height and weight before seeing the doctor
-Most patients say wait times can be up to an hour or more beyond scheduled appointment times.

Staff
-PSAs and nurses spend significant amount of time reminding patients to take height and weight
-locating patients who have lost their way or waited too long
-rescheduling appointments

Analyse Problem

What is your current process?



Current pamphlets

Haemoglobin A1C (HbA1C)

- Shows how your blood glucose levels control and whether you need to make any changes to your diet and lifestyle
- Shows how well you are managing your diabetes
- Shows how well you are managing your diabetes
- Shows how well you are managing your diabetes

Self-Monitoring of Blood Glucose (SMBG)

- Shows how well you are managing your diabetes
- Shows how well you are managing your diabetes
- Shows how well you are managing your diabetes

Why did patients not take their height and weight?
-forgot to
-don't know how to
-didn't know that they need to
(Thus solution would be to put up reminders and signs)

What can we do to make wait time seem more enjoyable or useful?
-Patients had wait time and we thought of making use of that time to engage patients to learn more about their condition (Thus solution came up with was to show videos)

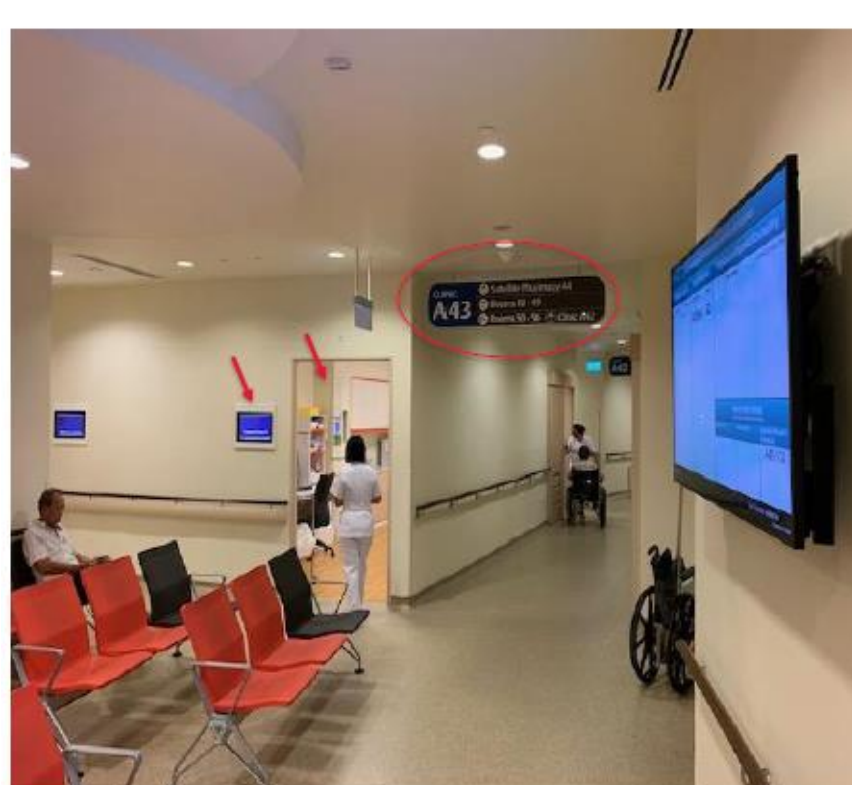
Why did patients not know what we monitor and why do they not have a record?
-did not understand what is

Why do patients not know how to locate the rooms in clinic?
-They did not have a way finder
-They could not see existing signs

Current Blood Glucose Monitoring Record

Date	Time	Pre-meal	Post-meal	Pre-bedtime

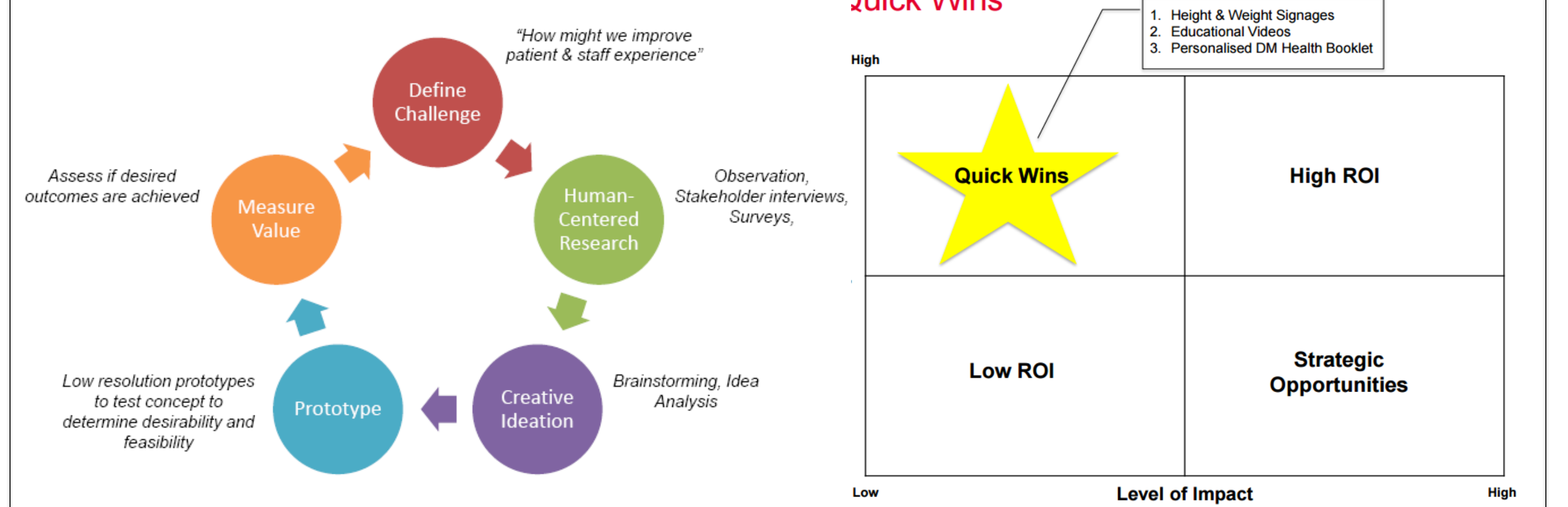
Current signages in Clinic A43



Select Changes

What are the probable solutions?

Methodology – Service Design Framework



How do we pilot the changes? What are the initial results?

SOLUTION	PLAN	DO	STUDY	ACT
SIGNS	Test if the height and weight signage help increase proportion of patients who take own initiative	Placed laminated signs near self registration kiosks and TV monitors. Placed sign where to place barcode on weighing machine	3 out of 11 patients did not (27%), 3 approached PSA to ask, 5 took their own height and weight without verbal reminders Feedback from PSA positive. They wanted signs to stay!	64% patients took own height, weight before seeing doctor. Improved by 20% Next steps -in-built reminder into self reg kiosk screen with language option or into EQMS or rolling text at bottom of TV
Education Videos	Find out what material we should play in clinic	Feedback gathered from patients on optimal length of video and what topics to cover	-Most patients found duration of about 1min 30sec to 2min ideal. -They wanted to know about dietary, fitness tips as well as when to start screening tests	Next steps -source for wider variety of videos with subtitles -convert content into pamphlets -send link to video via sms -gamification. To create quiz for learning
Health Booklet	Find out if patients and staff welcome the idea of a booklet which has color coded charts to keep record and also clinic map	Printed a prototype booklet	Most patients and DM HOD, service ops gave good feedback	Next steps -to work with more hospital to print booklets -incorporate this into an app

Fasting glucose tracking table

Extract from proposed DM health booklet

HbA1c tracking chart

Clinic Map - Clinic A43

Date	<6.0 Good	6.1-6.9 Watchout	>=7 Alert
01/01/19			
02/01/19			
03/01/19			
04/01/19			
05/01/19			
06/01/19			
07/01/19			
08/01/19			
09/01/19			
10/01/19			
11/01/19			
12/01/19			
01/02/19			
02/02/19			
03/02/19			
04/02/19			
05/02/19			
06/02/19			
07/02/19			
08/02/19			
09/02/19			
10/02/19			
11/02/19			
12/02/19			

Spread Change/Learning Points

What are the strategies to spread change after implementation?

- We would like to acknowledge our sponsors and advisors
- Ng Kian Swan (COO, NTFGH & JCH)
 - Dr Kurumbian Chandran (D, Endocrinology, NTFGH & JCH)
 - Sim Siew Ngoh (DD, Svc Ops, NTFGH & JCH)
 - Chay Yu Xuan (AM, Svc Ops, NTFGH & JCH)
 - Hoe Siu Loon (NUS)

What are the key learning points?

- Management support is important
- Stakeholder Engagement (at all levels)
- A larger, more targeted survey questionnaire to profile and understand patients better. For example, pre-diabetic, years of diabetics, insulin dependence
- Through human-centered research conducted to understand pain points by staff/patient so as to bring about a improve positive outcome of patient experience

Ng Teng Fong General Hospital
Jurong Community Hospital
Jurong Medical Centre

Members of the NUHS