

# Renovation and work process enhancement to nursing service stations for a better patient journey in Ang Mo Kio Polyclinic

**Nurse Manager Richard Low Sai Yin**

## Mission Statement

In order to further improve on the delivery of nursing care in AMK Polyclinic, the Nursing team embarked on a quality improvement project to enhance and improve on the current work process in the treatment room and DOTs Room.

There is also a need to enhance infection control practices by ensuring DOTs patients, patients identified with infectious diseases and patients requiring nursing treatment are being treated in separate areas.

## Team members

	Name	Designation
Team Leaders	Nirmala Nair	Head Nurse
	Richard Low Sai Yin	Deputy Head Nurse
Team Members	Soo Yoke Kiew	Senior Staff Nurse
	Susan Loh	Senior Staff Nurse
	Noraini Bte Abdullah	Senior Staff Nurse
	Lim Lay Beng	Senior Staff Nurse
	Vivien Cheng Su Ling	Senior Staff Nurse
	Letchimi D/O M Sanggaradas	Staff Nurse
Facilitator	Richard Low Sai Yin	Deputy Head Nurse
Sponsors	Dr Karen Ng	Clinic Head
	Nirmala Nair	Head Nurse

## Initial state / Current Condition

The current treatment room, DOTs and Dressing room are sited together in a cluster. This arrangement is not optimal and presents a few operational challenges:

- **Compromise patient care and safety.** Current room size of treatment room at 60sq feet is too small for the high patient volume. Treatment room capacity can be quickly overwhelmed during peak hours from 10am to 12pm.
- **Poor infection control practices.** There is a lack of a proper segregation room for segregation of patients with infectious diseases like chicken pox. Current workflow is to use DOTs room as a segregation room as well. The current design of the DOTs Room is also not in compliance with infection control guidelines.
- **Significant Motion waste.** The treatment room and the emergency doctor room are located far away from each other resulting in motion waste as the nurse needs to walk a distance of 20 meters to and fro each time she needs to seek advise from a doctor.

## Targets

The project team seek to achieve the following targets:

- Expand the capacity of the treatment room to handle the high patient volume.
- Have a proper segregation room and workflow for patients with infectious diseases.
- Reduce motion and transportation waste. The treatment room and the emergency doctor room should be in close proximity with each other.
- Achieve proper job allocation through process redesign.
- DOTs room design and work flow must adhere to current infection control guidelines.
- Elimination of non value added time in the delivery of patient care.

## Identification of Key Requirements

Key Requirements	Proposed solutions
Expand the capacity of treatment room	<ul style="list-style-type: none"> <li>• Relocation of dressing room to another area in the clinic to free up additional space.</li> <li>• Redesign of DOTs Room to eliminate redundant space.</li> </ul>
Adherence to infection control guidelines for proper segregation of patients with infectious diseases	• Design a proper segregation room with proper PPE gowning and degowning area for the clinic.
Reduce motion and transportation waste	• Location of Emergency doctor room to be as close to the treatment room as possible.
DOTs room adhere to infection control guidelines	• Redesign of DOTs Room.

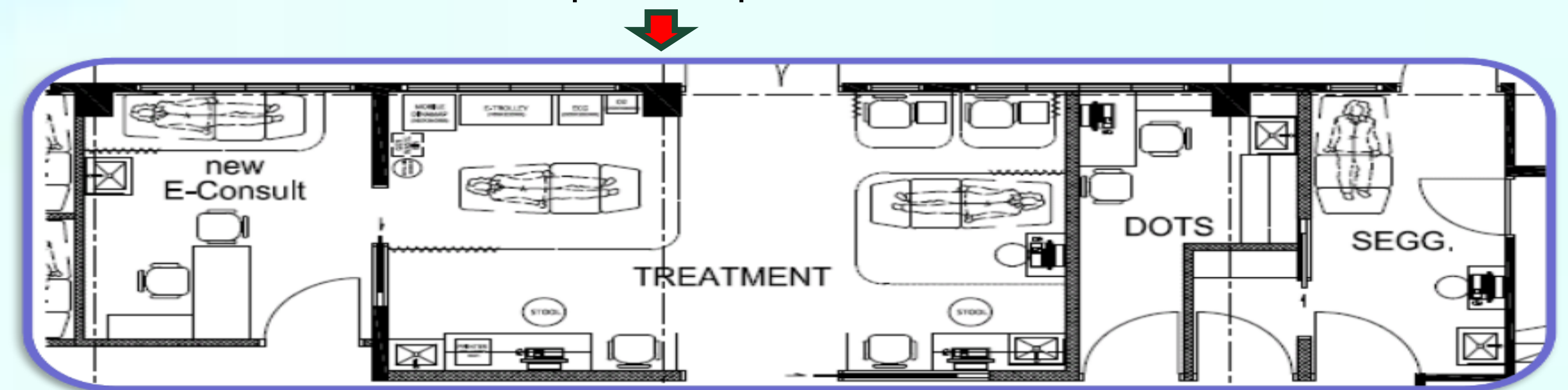
## Countermeasures proposed

Based on the gap analysis conducted, the project team then proposed that these 3 rooms be renovated based on the following planning parameters:

- Expand the size of the treatment room from the current size of 60 sq feet to 100 sq feet.
- Emergency doctor room to be sited next to the treatment room.
- Reduce the size of the DOT room from 20 sq feet to 10 sq feet.
- Relocation of dressing room to another area of the clinic.
- Built a new PPE gowning and segregation room on the area vacated by the dressing room.
- Have a proper sheltered walkway at the back door of treatment room to facilitate prompt and speedy evacuation of patients to A & E by ambulance.

## Testing of countermeasures


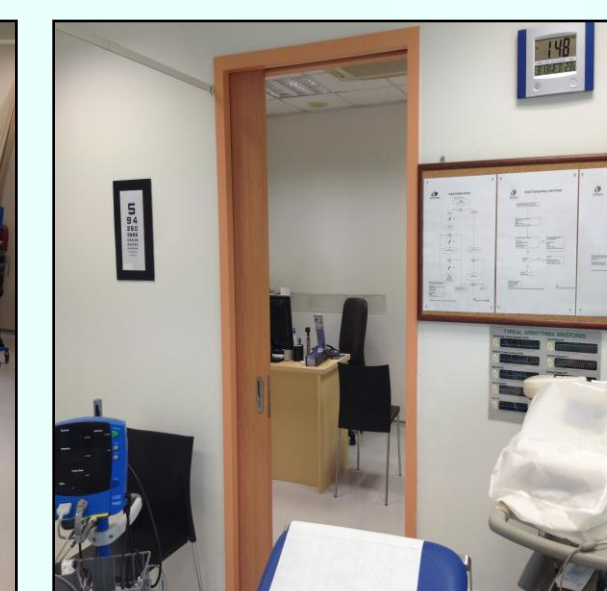

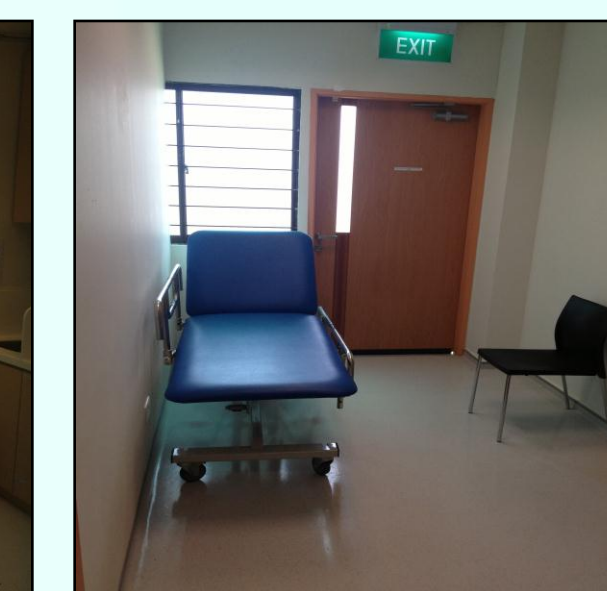
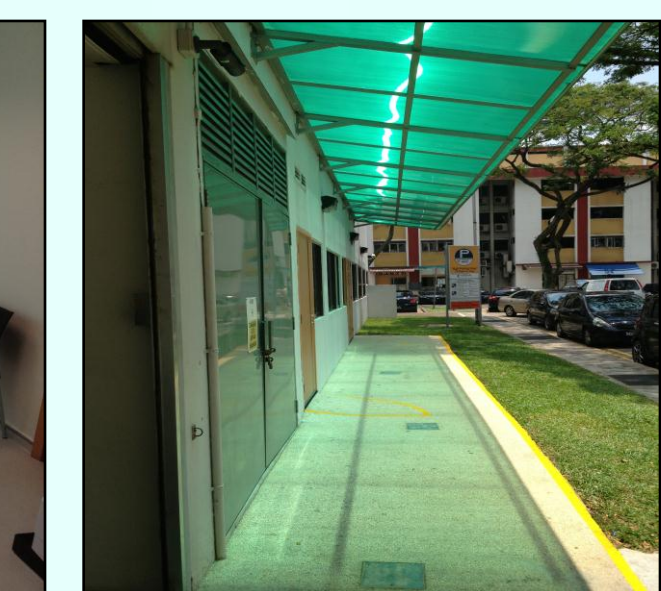
- The project team then went through a series of discussions to confirm the final design layout of the new treatment room cluster based on the countermeasures proposed.
- The team also came up with the proposed workflow for segregation, DOTs and treatment room patients post renovation.



Final design of the emergency consult, treatment, DOTs and segregation rooms

## Results

The renovation was completed with the following results achieved:

				
Expansion of capacity in Treatment Room. 50% more work stations and 100% more capacity for lying patients.	Emergency doctor room sited next to treatment room. 100% reduction in travel distance and motion waste.	New DOTs Room 100% compliant to current infection control guidelines.	Segregation room with back door enables patient with infectious diseases to exit without coming into contact with other patients.	Sheltered walkway provides prompt evacuation of emergency patients requiring further treatment in hospital.

An observation of patient's journey for 5 days post renovation also indicated that the likelihood of cross contamination is significantly reduced due to clear area demarcation. The treatment room is also able to handle a higher volume of patients due to an increase in area and equipment resulting in better quality of nursing care.

## Follow up plan post renovation

	Purpose	Task	Who	When/how often
1	To ensure nurses are comfortable with the new working environment.	To obtain staff feedback regarding new working environment and workflow	Project team	October 2012. Completed. Users reported 85% satisfaction rating.
2	To cultivate a process of constant improvement in work environment.	Nurses will be asked to suggest on ideas and any other equipment that can be procured to enhance current treatment room set up.	Nursing Manager	Every quarterly
3	To ensure new workflow and environment is more conducive for patients.	To track patient feedback	Nursing Manager	23 <sup>rd</sup> March 2013. Patient focus group. Feedback from patients were 100% positive.

## Insights and lessons learnt

### What went well and why?

- The targeted outcomes were all achieved and this significantly enhances the quality of nursing care delivery.

### What did not go well and what you could have done?

- Poor quality of renovation workmanship resulted in constant need for repairs and rework. This reduces end user satisfaction significantly.