

# Improving Patient Care Delivery through Streamlining and Standardising Processes at an outpatient Day Rehabilitation Centre

LC Pang<sup>1</sup>, WC Loh<sup>1</sup>, JY Chui<sup>1</sup>, CC Chug<sup>1</sup>, LK Tan<sup>2</sup>

<sup>1</sup> Day Rehabilitation Centre, <sup>2</sup> Allied Health and Operations  
St. Andrew's Community Hospital

## Background / Define the Problem

St. Andrew's Community Hospital (SACH) Day Rehabilitation Centre (DRC) provides outpatient rehabilitation services for patients who require additional therapy after being discharged from a hospital.

In tandem with Singapore's rapidly ageing population, the demand for rehabilitation services is expected to rise. To cope with the increasing number of patients visiting SACH DRC, the team embarked on a work improvement project to review and analyse the work processes of therapy and support staff as well as implement solutions to improve patient service delivery and workflow efficiency.

## Goal / Objective

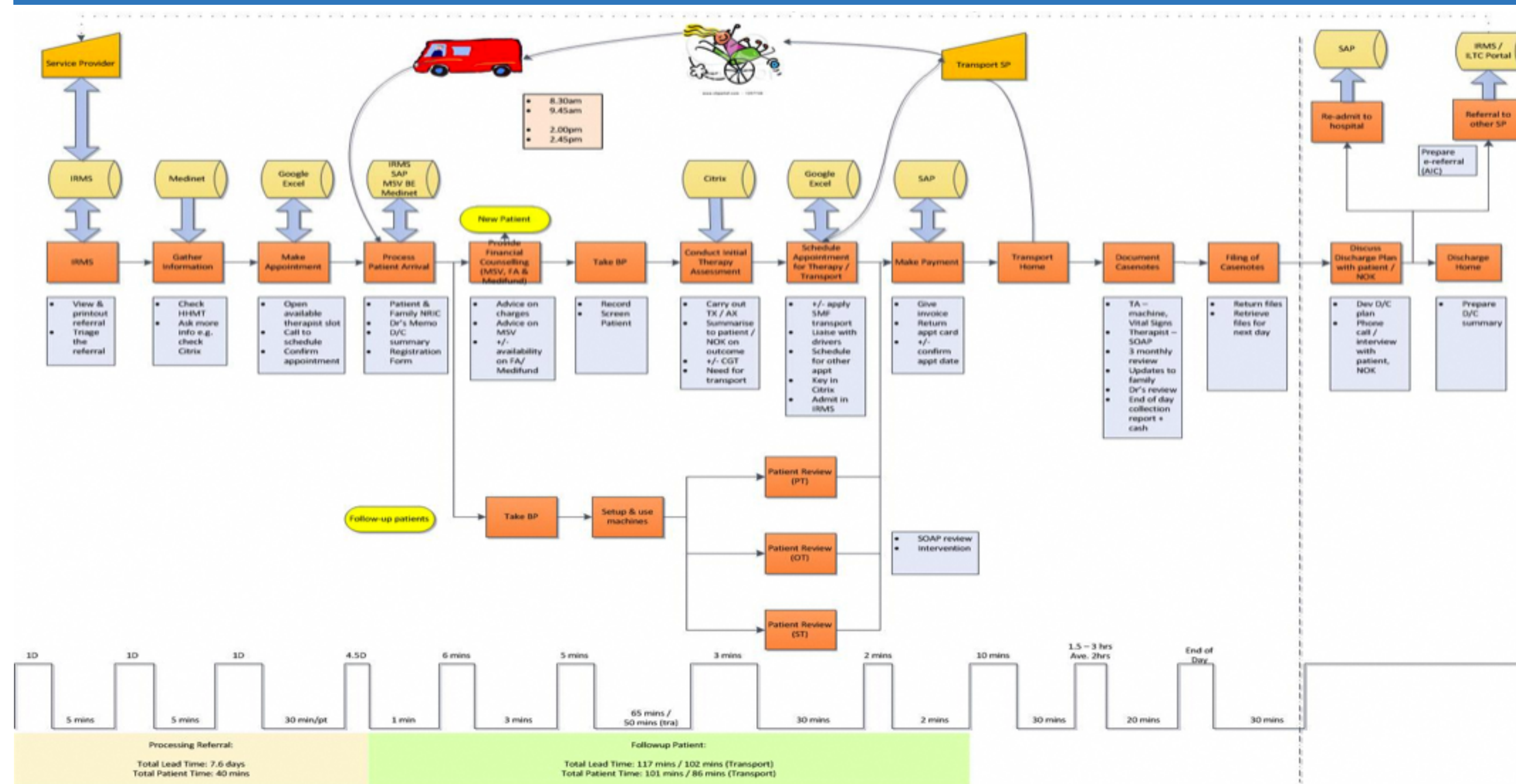
The project aims to improve the patient care delivery of SACH DRC through the examination of core processes.

- Map and analyse gaps of the current work processes in DRC:
  - Clinical staff (rehabilitation services)
  - Non-clinical staff / Patient Service Assistant (reception services)
- Study the utilisation of professional staff, particularly Physiotherapists, Occupational Therapists and Therapy Assistants (TAs)

## Methodology

The Lean methodology was used to analyse the waste and inefficiency in the DRC work processes. A Value Stream Mapping (VSM) exercise was conducted over 6 days involving different functional representatives from the DRC.

**Figure 1: SACH Day Rehabilitation Centre (Current State VSM)**



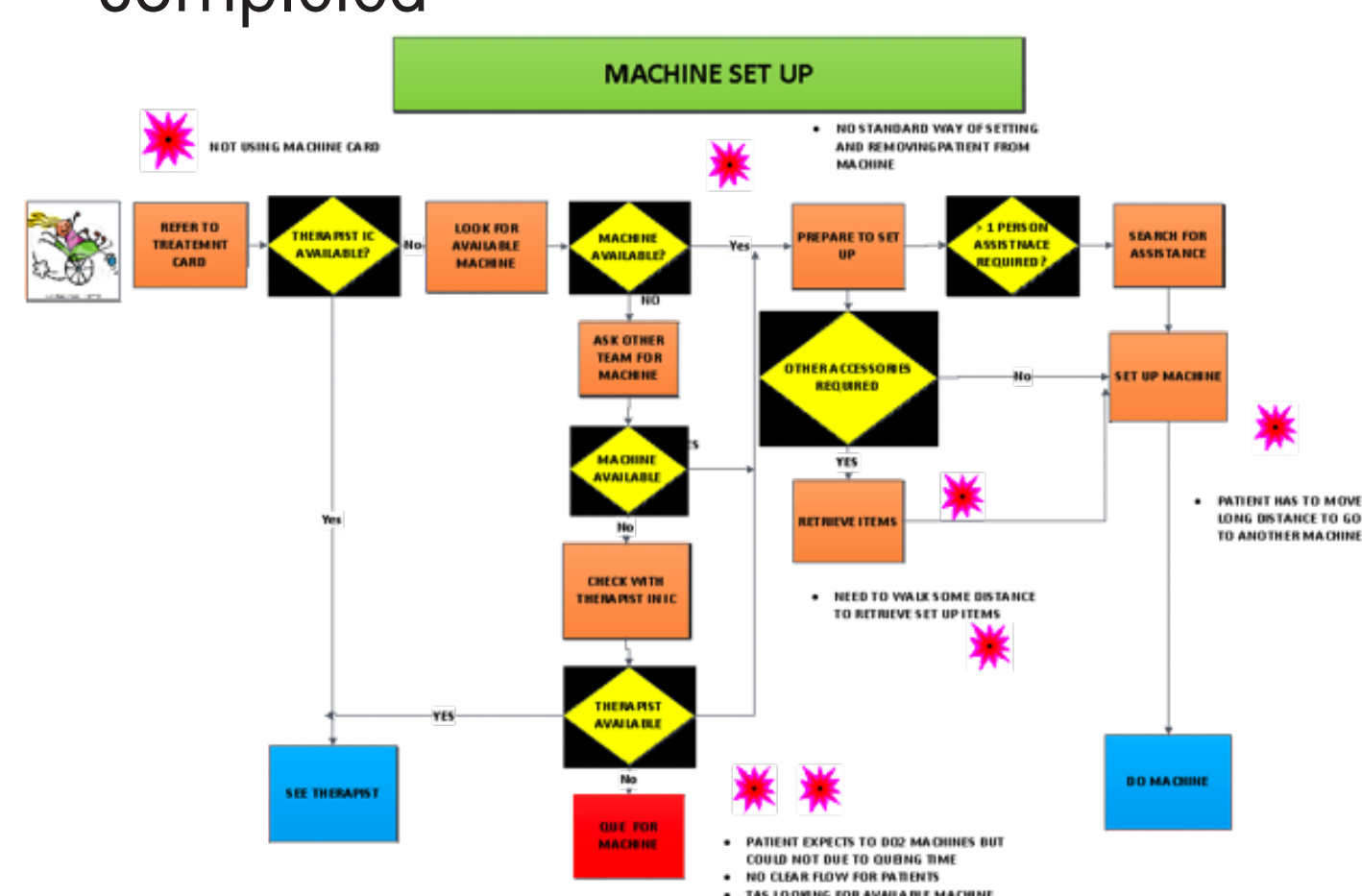
Observations (Gemba Walk) were conducted by the staff to identify the amount of time spent on value-added work versus non-value added work, issues faced by the rehabilitation team as well as the bottlenecks in the processes.

**Figure 2a: Gemba Walk**

Machine setup process (therapy)

Waste identified:

- Waiting for machine
- Unsure of whether the task has been completed

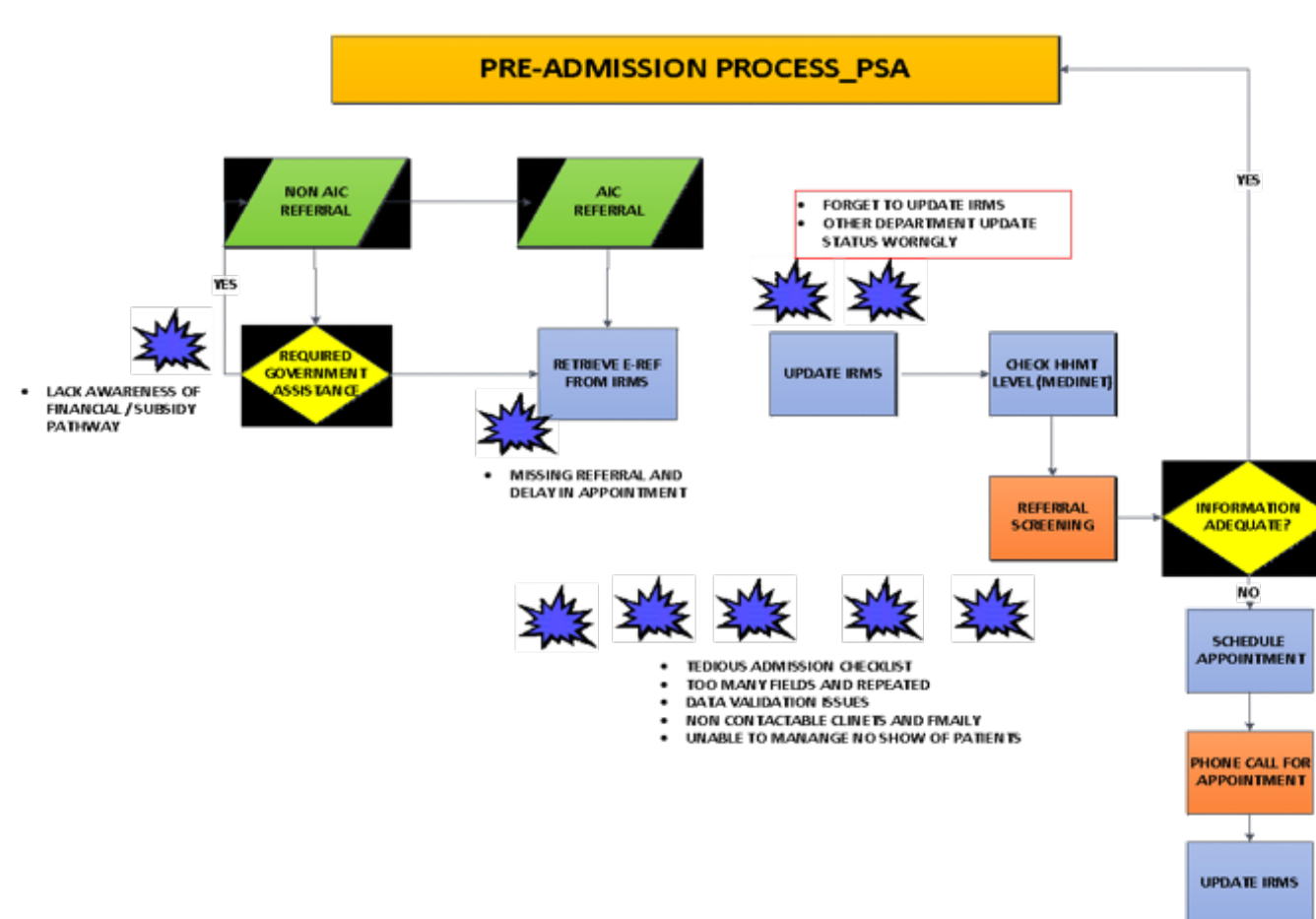


**Figure 2b: Gemba Walk**

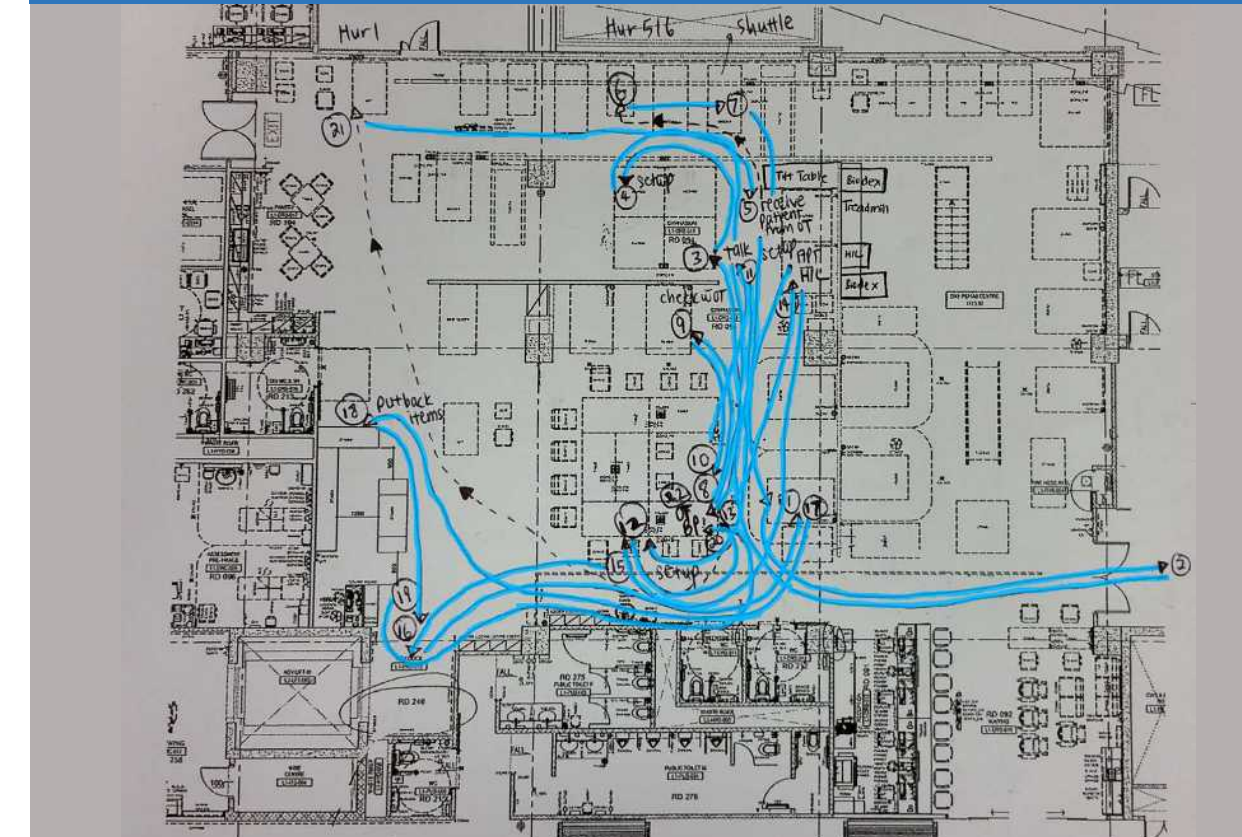
Pre-admission process (PSA)

Waste identified:

- Uncontactable clients
- No standard calling system



**Figure 3: Spaghetti Mapping**



Therapy Assistant in a 30-minute period  
- Motion waste and overcrowding in certain areas.

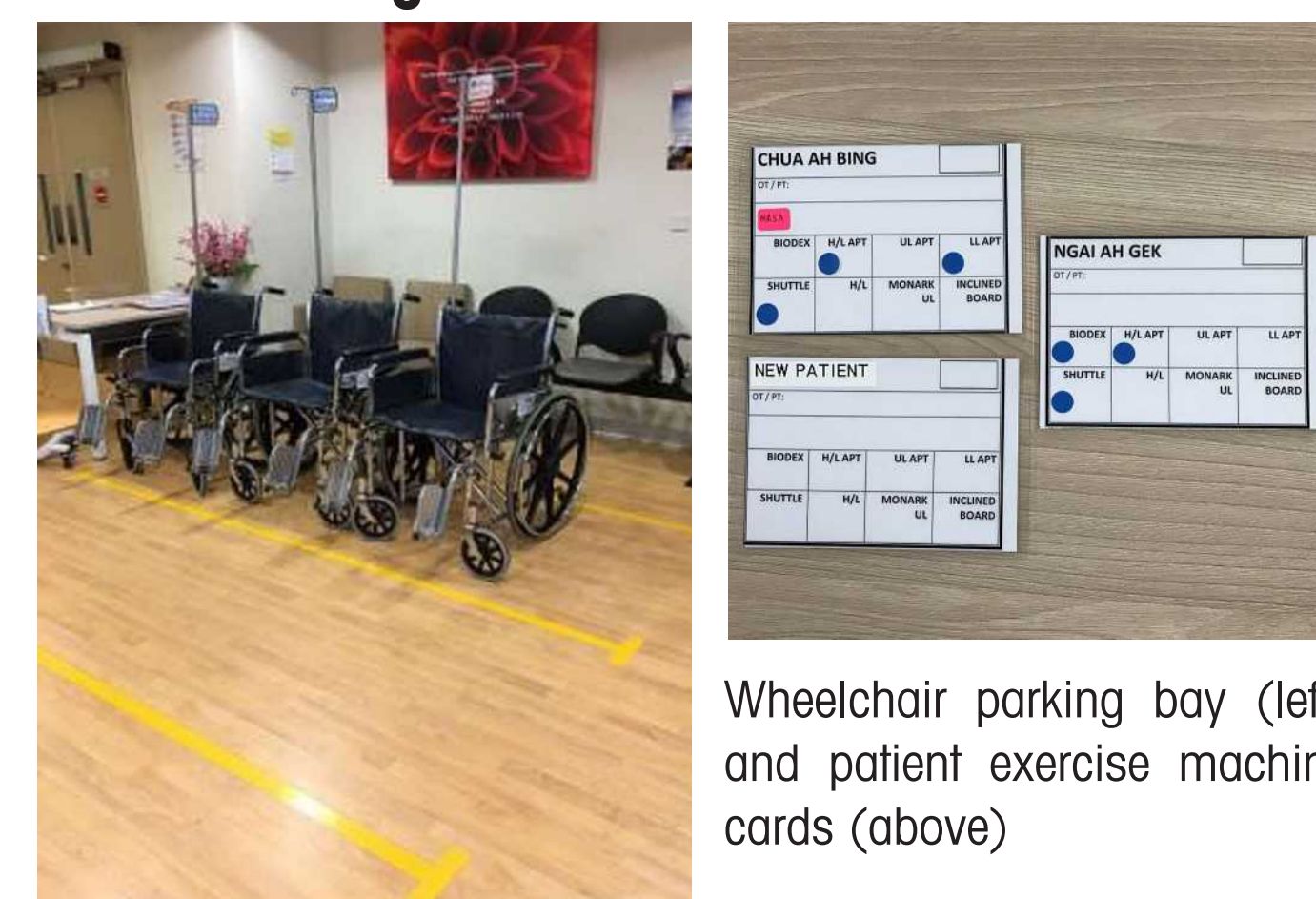
**Figure 4: Job review and redesign**

Job Task	Brief Job Elements	Process Time (mins/patient)
Simple screening	<ul style="list-style-type: none"> <li>Cognitive Ax (AMT)</li> <li>Falls history screening</li> <li>Wheelchair safety / Ax</li> </ul>	15
Ax Caregiver Competency	<ul style="list-style-type: none"> <li>Assess caregiver's competency assisting patient (transfers, ranging exercises, etc)</li> </ul>	20
Caregiver training	<ul style="list-style-type: none"> <li>Teaching of caregiver</li> </ul>	30
Therapy intervention	<ul style="list-style-type: none"> <li>Simple cases i.e. fracture hip</li> </ul>	20

Utilisation of professional staff  
- Possible job task that can be allocated to therapy assistant from therapist.

## Intervention

### Solution 1: Introduction of 6S & Visual Management



Wheelchair parking bay (left) and patient exercise machine cards (above)

Improve workplace organisation and arrangement (figure 2a) to reduce non-value added work and patient's waiting time.

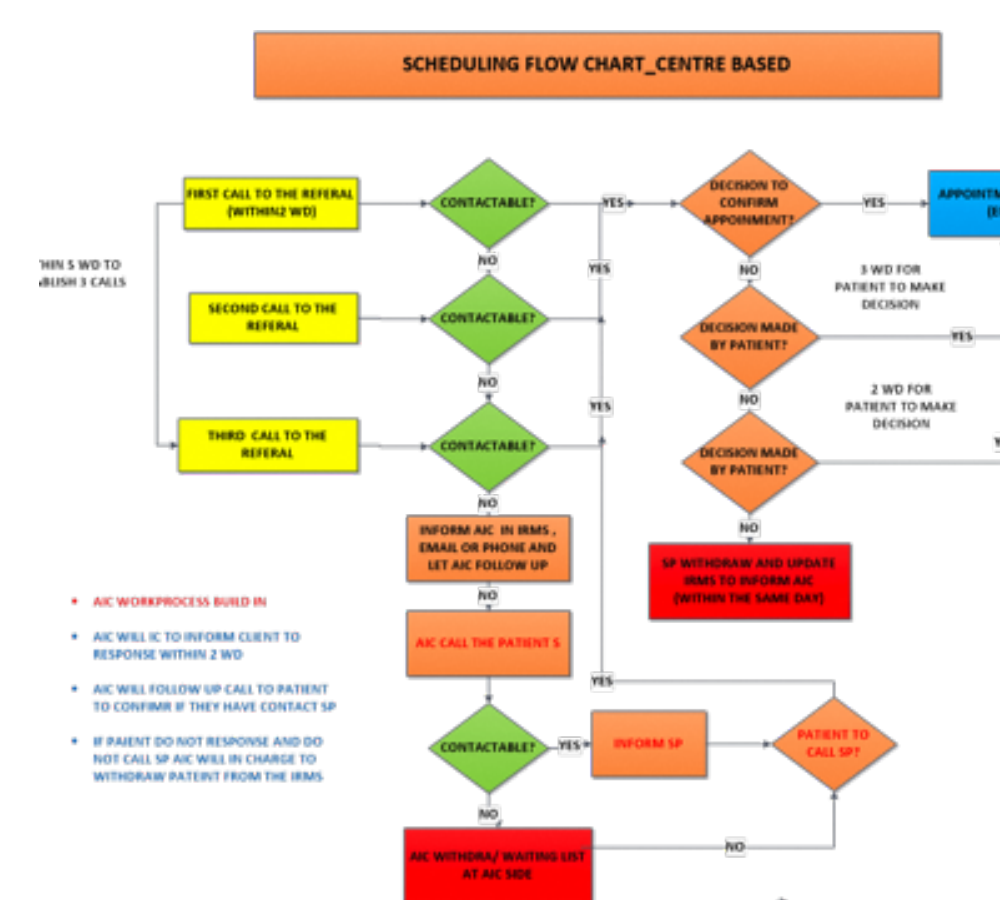
### Solution 2: Redesign layout of DRC



Relooking at the layout of DRC to improve workflow and motion waste (figure 3).

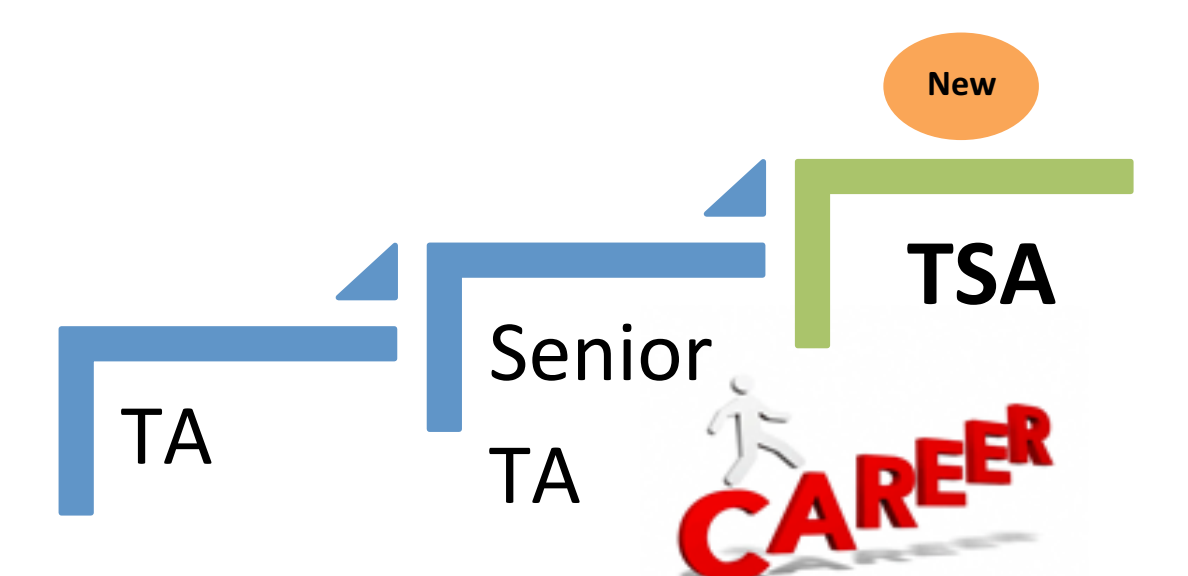
### Solution 3: Standardise work process

- PSA calling system



### Solution 4: Development of a new job role: Therapy Support Associate (TSA)

- Improve the competency of TAs
- Improve utilisation of professional resources and productivity



## Target Measurements

- Motion waste: reduce number of walking steps required to move around when performing key processes by 20% (Solution 2)
- Non-value added work: reduce time wastage on non-contactable patients by 20% with standardised calling system (Solution 3)
- Waiting time waste: Reduce patient's waiting time at BP counter and gym area by 20% (Solution 1)
- Job redesign: Time saved by 20% with allocation of job tasks from Therapists to TSAs (Solution 4)

## Benefits / Results

- Reduction in time used on non-valued added work allows the rehabilitation team to spend more direct contact time with patients
- Standardisation of work processes, procedures and practices.
- Allows the therapist more time to handle more complex cases while empowering the TA to handle patients who require simple and straightforward rehabilitation needs.

## Conclusion

For DRC staff, there will be increased job satisfaction as more time can be spent interacting with clients and purposeful work. This is made possible with the reduction of time spent on non-value added work. For the patients, the quality of care will be improved as there will be a reduction in waiting time and care staff are able to consistently deliver standardised protocol of practices.