

# Reducing Waiting Time for Transplant Patients on Follow Up Visits

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## INTRODUCTION & BACKGROUND

The Transplant Centre opened in September 2013 with the vision of providing a one-stop multidisciplinary patient care for Transplant patients who are immunosuppressed. Prior to the setup of Transplant Centre, these patients are followed up at mixed disciplines clinics at various locations where their primary physicians run their clinic sessions.

As these patients are susceptible to infections which healthy immune systems can usually overcome, the Centre aims to **shorten their time spent in the hospital and minimise their contact with the general group of patients.**

### OBSTACLE

The average time spent including waiting time for a transplant patient is about **2.5 hours** at the clinic and another **30 minutes** at the Pharmacy.

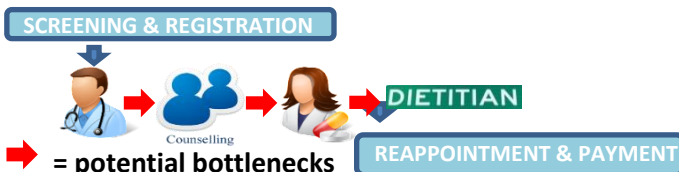


### HURDLE # 1

- ❖ Long waiting time in between consultation with different healthcare professionals.
- ❖ Patients and Case Records are transferred manually from one healthcare professional to another.

### CAUSES

- ❖ A typical transplant patient's follow up appointment will include reviews by the following healthcare professionals:
  - ☐ Physician
  - ☐ Clinical Pharmacist
  - ☐ Dietitian
  - ☐ Transplant Coordinators
- ❖ Limitations in the queue system results in patients being transferred in a standard one way sequence:



- ☐ When there is a complex case which requires a longer review, patients who are queued behind this case will experience an increase in waiting time.
- ☐ A bottleneck is created as the system does not allow the other patients to 'skip' any service station in the sequence and be reviewed by another healthcare professional who may be available.
- ☐ As a result of the bottleneck, healthcare professionals and patients suffers unnecessary waiting and idle time.

### SOLUTION

- ❖ A flexible web-based queue system was implemented. This system is designed to allow:
  - ☐ Multiple healthcare professionals to view the same patient work list and journey.
  - ☐ Reflection of patient's status as 'waiting' or 'active', indicating whether patient is idle or being reviewed by a healthcare professional,
  - ☐ Healthcare professionals to 'pull' a patient who is idle instead of waiting for the patient to be 'pushed' to them. This function greatly reduces patient's idle time created by the bottlenecks.
- ❖ A central case record holding area was created to facilitate the 'pull' function
- ☐ All healthcare professionals are to return the case record to the central holding area once they have reviewed the patient. Hence, all 'idle' patients' case record will be located in the holding area



### HURDLE # 2

- ❖ Multiple queue points as patient have to queue for multiple service stations at 3 different locations.

### CAUSES

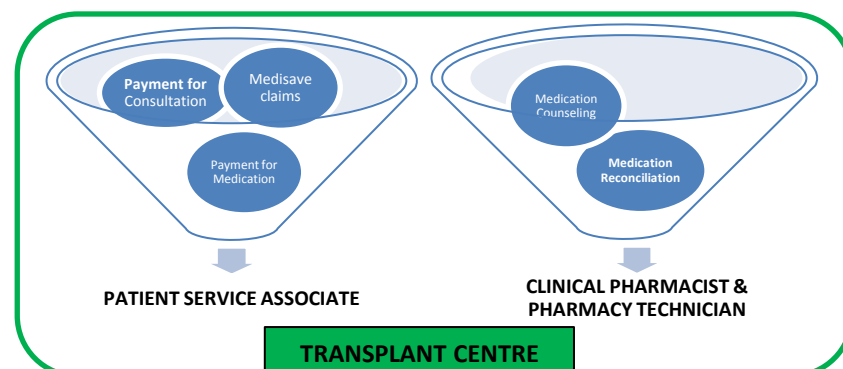
- ❖ The patient will have to go through several service stations in the Clinic, Pharmacy and Medisave Counter:

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> <b>Clinic</b>                 | <input type="checkbox"/> <b>Pharmacy</b> | <input type="checkbox"/> <b>Medisave Counter</b> |
| 1. Screening   | 1. Medication                            | 1. Paperwork for Medisave claims                 |
| 2. Registration  | 2. Reconciliation                        |  |
| 3. Consultation with multiple healthcare professionals | 2. Collection of Medication              |  |
| 4. Re-appointment & Payment                            | 3. Payment for Medication                |  |

- ❖ Patients have to re-queue for similar services at the various location. For example, payment for consultation at the clinic and payment for medication at the pharmacy.
- ❖ As transplant patients need to be on strict medication advice, time spent with the clinical pharmacist and pharmacy technician is longer than the general cases.

### SOLUTION

- ❖ Grouping some of the similar services provided at different locations and identifying the key provider who can serve the patients.
- ❖ Bringing the grouped services into Transplant Centre to streamline the patient care for transplant patients.



- ❖ By embedding services like payment for medication and medication reconciliation into Transplant Centre's workflow, we are able to cut down the waiting time spent queuing for the services at different location.

WITHIN TRANSPLANT CENTRE								WITHIN PHARMACY	
WHERE?	Triage Area	Front Counter	BM/PP Station	Consultation Room	Consultation / Counselling Room	Counselling Room	Consultation / counselling Room	Front Counter	Pharmacy
WHO?	PSA	PSA	PSA	Physician, PSA, Nurses	Renal Coordinator	Dietitian	Transplant Pharmacist	Pharmacist Technician, PSA	Pharmacy staff
WHAT?	Screening	Registration, explanation of Journey	Measurement of BMI/BP	Consultation	Transplant related counselling	Dietitian counselling	Medication counselling	Pharmacy reconciliation, payment	collection of medication

### RESULTS

- ✓ The average time spent including waiting time for a transplant patient dropped to about 45 minutes at the clinic and about 15 minutes at the Pharmacy.
- ✓ Overall satisfaction of transplant patients based on feedbacks average at 95% (KPI = 90%).
- ✓ Reduced exposure of transplant patients to potential infection during follow up visits

