#### **Streamlining patient flow at SOC** Singapore **General Hospital Clinical Laboratories** SingHealth

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# BACKGROUND

- Overcrowding at SOC Clinical laboratories
- Long waiting time for patients
- Patients unhappy and staff stressed
- Operational inefficiency
- Compromise in service standards

## **AIMS**

- Understand cause of over-crowding
- Reduce patient jams at choke-points
- Ensure smooth patient-flow
- Enhance patient and staff satisfaction
- Incentivize patients to pre-pay

# **METHODOLOGY**

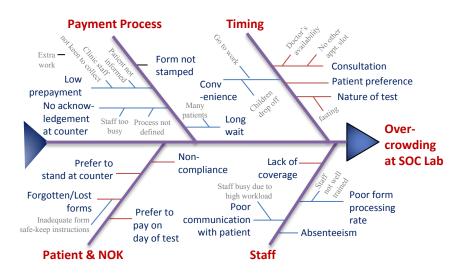
- Fish-bone diagram
- Process Flow analysis

- Patient Survey
- Analysis of past patient-visit data

Reasons for coming in the morning for blood

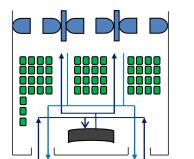
tests (N=590)

Cause and Effect Diagrams



### Findings from survey, root-cause & data analyses

- 500-550 patients/daily. Skewed-workload(70% before noon).
- 46% of patients who came in the morning for their tests, could have technically come at any other time as well.
- Their test requiring them to fast, same day consultation and the *need to go to work after their test*, were the main reasons why patients came to the lab in the mornings.
- Incomplete communication to patients during the ordering of the 0 tests, resulted in delay due to the need to re-print orders forms.
- Lack of a queue system at the counter meant that patients arrival was not acknowledged in any meaningful way.
- Patients waited around the payment counter, worried that they won't hear their names when they are called for payment.
- Waiting area not optimal for wheelchair movement. 0
- Poor processing rates at payment counter due to large numbers. 0
- For patients, acceptable waiting time at the lab was 15-30 mins (1/2 to 1/3 of their current waiting times).



Patient-Flow (before)

- **Phlebotomy Stations** Cash Collection Counter Waiting Area Seats Patient Arrival (all) Patient Departure (all) **Counter Queue Display Triage Station** 
  - Patient Arrival (pre-paid) Patient Arrival (to pay)

Distribution of patient load over time of day (Aug'11)

Patient-Flow (after)



Payment Counter not crowded (after)

Patients are encouraged to pre-pay at the clinics They don't have to wait for payment on the day of test ACTIONS Clinic staff were trained to communicate effectively Reduction in patients' requests for re-printing forms Chairs were re-organized at the lab waiting area Easy movement for all including wheelchair patients & Training to lab counter staff for increased throughput Faster processing of payment means lesser waiting Triage counter at lab to attend to patients promptly Happier patients because their arrival is acknowledged OUTCOME Pre-paid patients can proceed directly for their tests □ Start of secondary queue system at the lab counter □ Patient flow through the SOC clinical laboratory is more systematic with lesser crowding at the counters. Average total waiting time at the lab for patients has been favorably affected, due to patients having to wait lesser for their payments at the lab payment counter (affects both pre-payment and same-day-payment patients). CONCLUSION 

Counter staff are more at ease since there are fewer patients crowding around the payment counter. U While increase in waiting area and renovating more tests stations would have been expensive and time consuming, tweaking of workflow based on extensive process and data analysis helped achieve the same objectives.

Crowding at payment counter (before)

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