SDA Optimisation eliminating the "need" for House Officer deployment on Surgery Day

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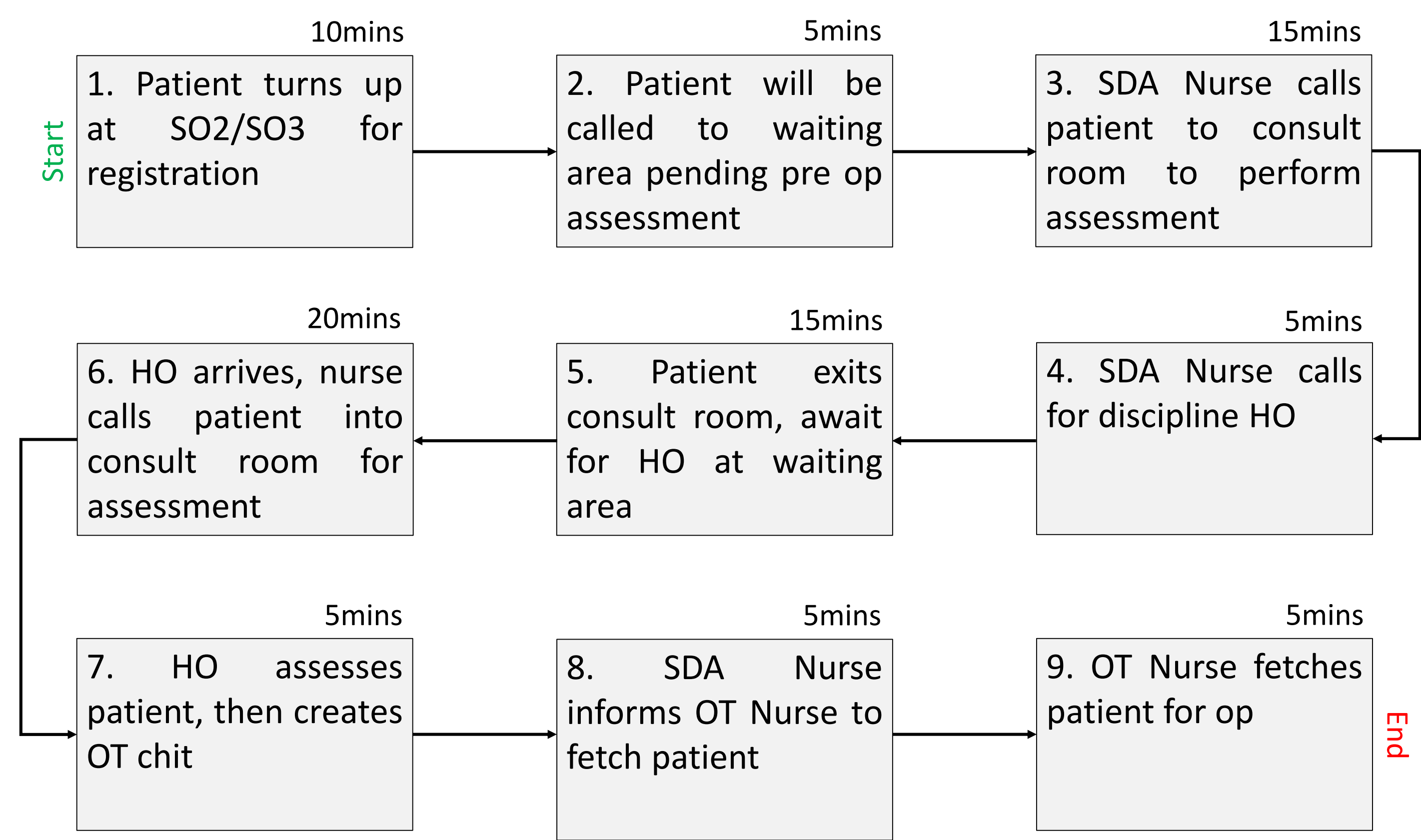Singapore Healthcare Management 2019

Sengkang General Hospital — SingHealth

Background

The Same Day Admission (SDA) ward performs pre-op checks for all SDA and Day Surgery (DS) patients. On an average, SDA ward may see up to 25-30 patients, amounting to 75% of the average daily surgery load. The efficiency of preparing patients prior to surgery will prevent delays to the Operating Theatre schedule. Currently, the pre-op assessment requires an average of more than 60min per patient. Streamlining the processes in SDA will optimise clinical manpower deployment and improve patient experience.

Current State

Process flow of pre-op SDA / DS patients:

10mins Start 1. Patient turns up at SO2/SO3 for registration	**5mins** 2. Patient will be called to waiting area pending pre op assessment	**15mins** 3. SDA Nurse calls patient to consult room to perform assessment
20mins 6. HO arrives, nurse calls patient into consult room for assessment	**15mins** 5. Patient exits consult room, await for HO at waiting area	**5mins** 4. SDA Nurse calls for discipline HO
5mins 7. HO assesses patient, then creates OT chit	**5mins** 8. SDA Nurse informs OT Nurse to fetch patient	**5mins** 9. OT Nurse fetches patient for op End

Average Total Process Time: 85min

Root Cause Analysis

The current process flow had various interdependencies resulting in unnecessary delays and inefficiencies. Process 4, 5, 6 and 7 circled in red below are the critical "delay points"
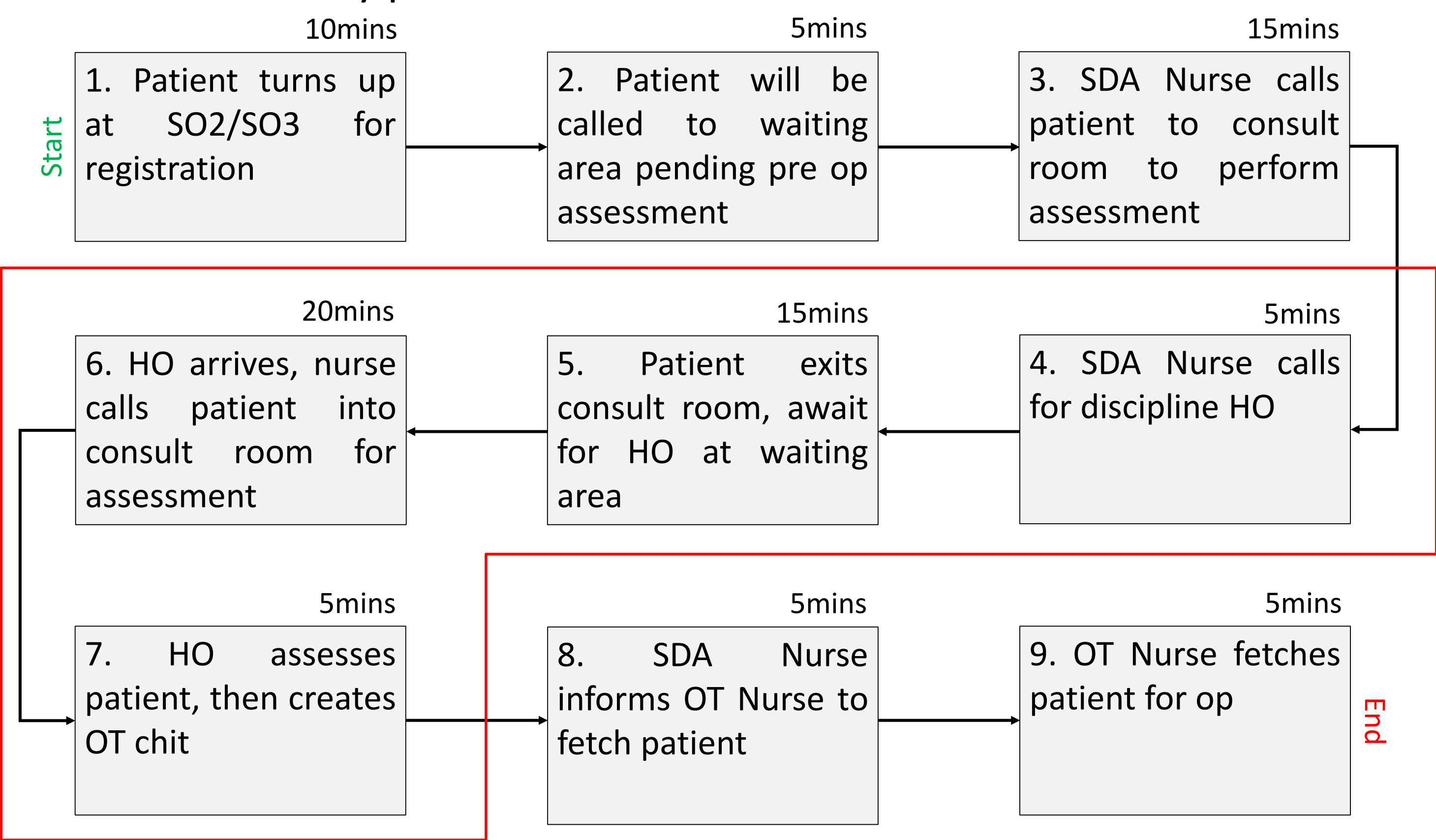
Key Delay Factors:

1. Long Wait for HO's arrival at SDA
   • HO is preoccupied with ward rounds and/or other clinical duties.
2. Bottleneck at HO's Assessment
   • HO's assessment can only be done after Nurse's assessment.
   • There is only 1 HO to assess multiple patients on the same day.
3. Overhead in OT Chit Creation by HO

Goals / Targets

To reduce average total pre-op assessment time by 50% from 62min to less than 30min within 2 months.

Interventions / Initiatives

PDSA-1

(1) Elimination of HO Assessment on Surgery Day
  a. Implement the SDA pre-clerk note for primary surgical team to put up (within 72hrs) **prior** to the surgery.
  b. Implement an SDA checklist where SDA nurses could make reference to the pre-clerk note to assess patient.
(2) Elimination of OT Chit Creation by HO
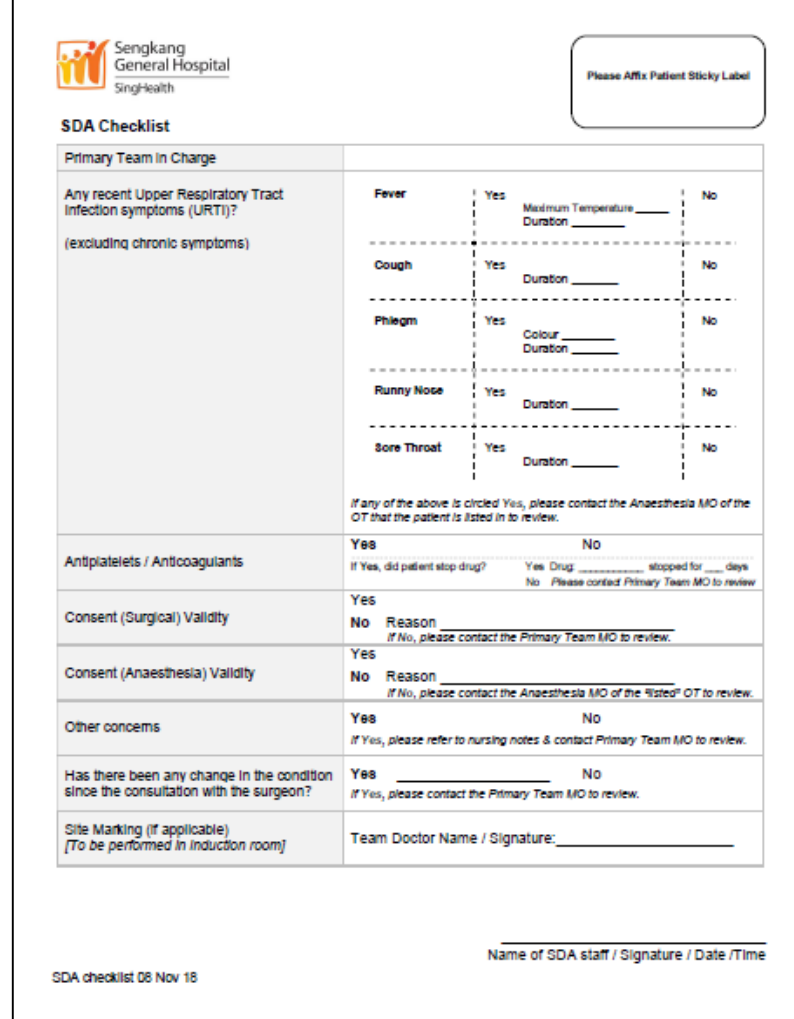 a. Develop an excel computation system to auto-populate barcodes replacing OT chits.

PDSA-2

(3) Reiteration of new processes to all stakeholders
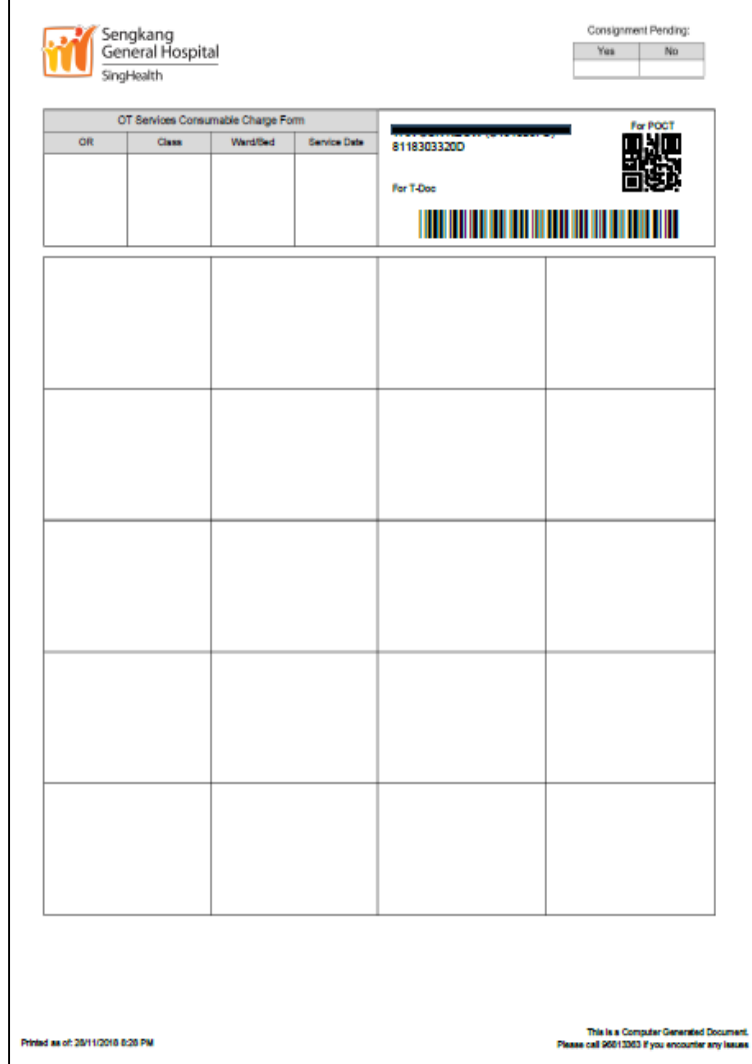
SDA Pre Clerk Note in SCM   SDA Checklist   Barcoded Charge Form
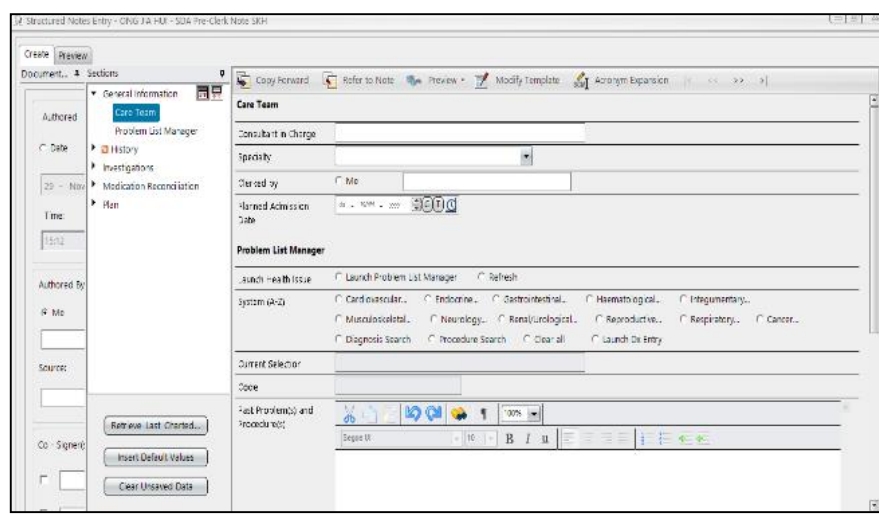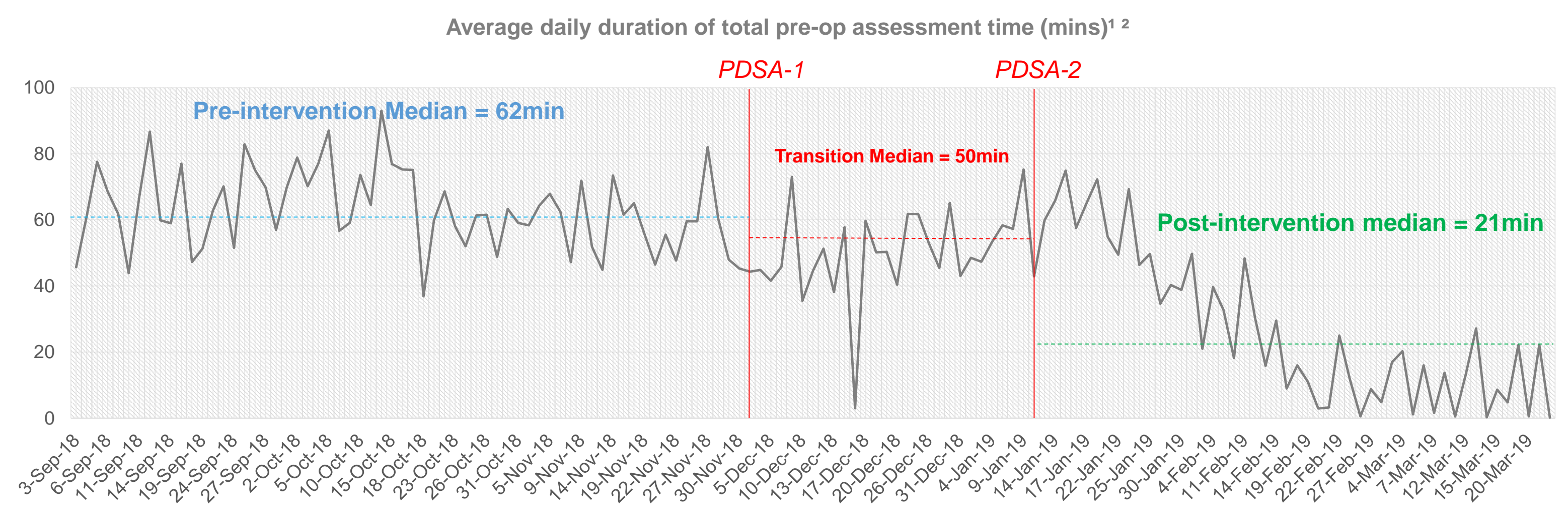

Implemented electronic Checklist after 11 May 2019

Implementation Plan

S/N	Implementation Plan	Timeline	Implemented by:
1	Design and implementation of the SDA pre clerk checklist	08 Oct – 26 Oct 19	Dr Chua Hui Wen
2	Design and implementation of the Nursing SDA checklist	15 Oct – 26 Oct 19	NC Nazeemah
3	Design and implementation of the barcoded charge form system	05 Nov – 09 Nov 19	Aven Ng
4	Seeking endorsement and approval from all stakeholders	12 Nov – 23 Nov 19	A/Prof Chew Min Hoe
5	Implementation of PDSA-1	3 Dec 19	All
6	Implementation of PDSA-2	14 Jan 19	All

Results / Follow up

Average daily duration of total pre-op assessment time (mins)[1][2]

Pre-intervention Median = 62min
PDSA-1
PDSA-2
Transition Median = 50min
Post-intervention median = 21min

[1]Data source: RTLS data & OTM data.
[2]Method: Duration based on min of start consult time to max of end consult time, error data of duration >150mins excluded, consult duration after surgery start time excluded.

Initial rollout did not attain 100% awareness of new processes by staff, hence the results showed less than 20% reduction in total pre-op assessment time. After PDSA-2 was implemented, there was significant improvement of **more than 65% reduction** in total pre-op assessment time.

With the elimination of HO assessment on surgery day, the clinician manpower requirement is streamlined and the respective surgical teams can better re-deploy their limited HO resources to fulfil other clinical duties.