

Project Title

Improving Patient Experience Through Seamless Inter-SOC Blood Taking at the Specialist Outpatient Clinics (SOCs) in Tan Tock Seng Hospital (TTSH)

Project Lead and Members

Project lead: Jamilah Jantan (SNM, OMU) – Team Lead

Project members:

- Karen Rajoo D/O Gomathy (AD, OMU)
- Siddhartha Sanyal (DD, OMU)
- Sr Neo Chee Hoon (SNM, Endoscopy Centre)
- Sr Ng Cheng Suan (NEII, OMU)
- Bavani Deyvi (SCM, Clinic B1A)
- Zuhaidah Bte Ahmad Dan (NMII, Breast Clinic)
- Mohamed Maliki Bin Mohamed Nasir (SSN, OMU)
- Peck Xin Hui (SN, OMU)
- Lim Hui Pin (Manager, Kaizen Office)
- Mohamed Razeen Bin Samsudeen (Asst Manager, Kaizen Office)

Organisation(s) Involved

Tan Tock Seng Hospital

Project Period

Start date: Nov 2015

Completed date: On-going

Aims

To improve patient's experience through inter-Specialist Outpatient Clinic (SOC) blood drawing where patient is pricked only once.

Background

See attached

Methods

See attached

Results

See attached

Lessons Learnt

This project provided the team with three main lessons:

- Continuous improvement was essential for success as the reviewing of the inter-SOC blood taking process resulted in an improvement in the take-up rate
- Importance of various forms of communication to engage staff such as reinforcement by clinic managers and sharing about the practice in SOC Orientation Programme to sustain practice
- Good teamwork and a collaborative approach were important to enable the various stakeholders to streamline the process and enhance patient experience.

The team also realised that that labour-intensive manual recording of data and reporting was one of the main reasons for the cause of missing data in 2018. The future submission into EGIS may improve uptake, compliance and resolve this issue.

Conclusion

We must strive to find better ways to provide and deliver excellent patient care and services to create a positive journey for our patients at SOC. Embrace the TTSH “Kampong Spirit” to achieve “Better Care, Better People and Better Patient Safety”.

Project Category

Care Redesign

Keywords

Care Redesign, Patient Experience, Workflow Improvement, Quality Improvement, System Level Improvement, Improvement Tool, Cause and Effect Analysis, Cost Savings, Waiting Time, Nursing, Kaizen, Tan Tock Seng Hospital, Visual Cue, Blood Collection, Outpatient Management Unit

Name and Email of Project Contact Person(s)

Name: Ms Jamilah Jantan

Email: jamilah_jantan@ttsh.com.sg



**Tan Tock Seng
HOSPITAL**
National Healthcare Group

Improving Patient Experience Through Seamless Inter-SOC Blood Taking at the Specialist Outpatient Clinics (SOCs) in Tan Tock Seng Hospital (TTSH)

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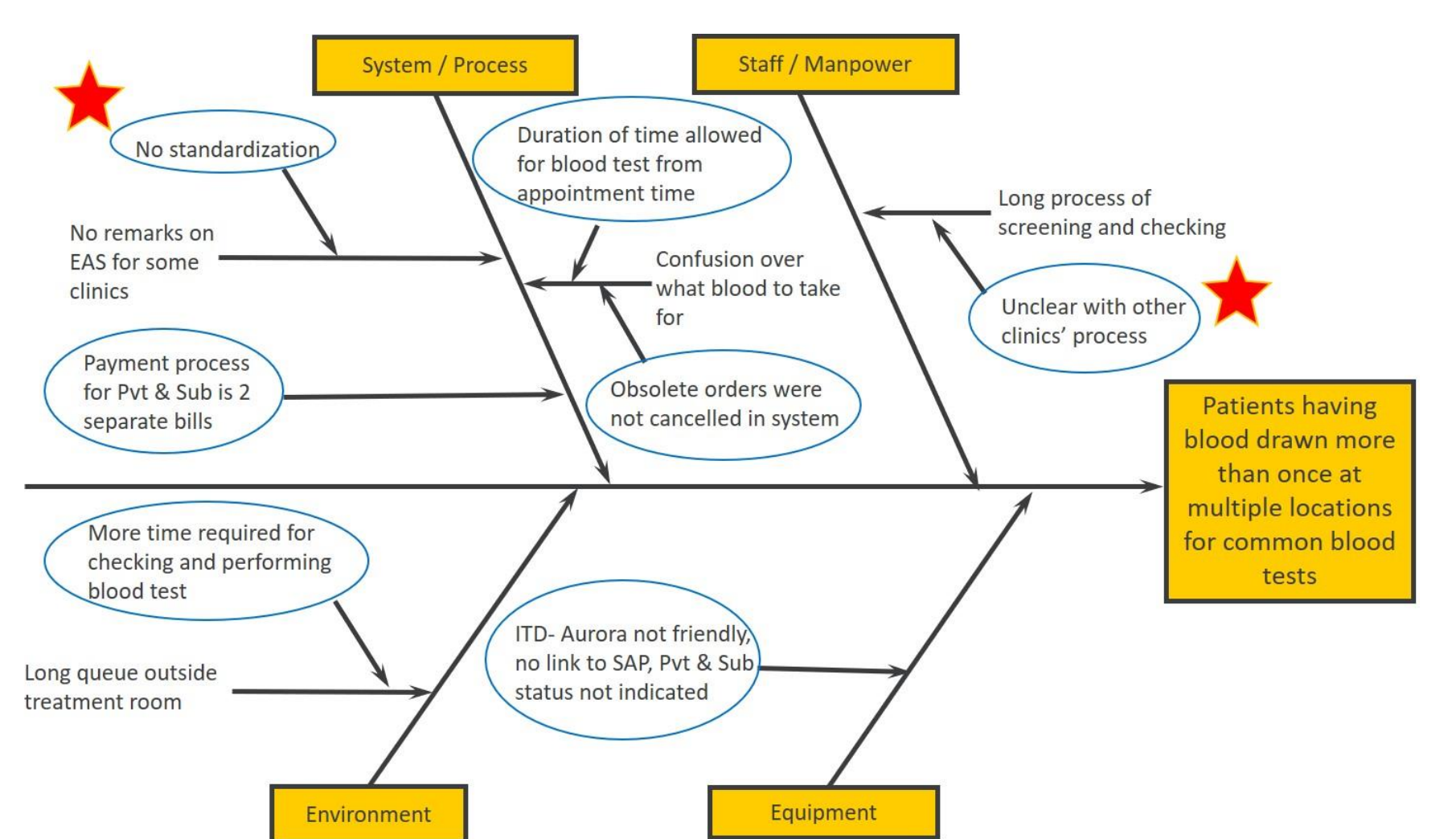
Background

TTSH patients tend to have multiple comorbidities with several appointments at different clinics with independent blood orders. As a result, **multiple and duplicate blood tests are ordered which translates to unnecessary cost and patient discomfort from multiple pricks.**

A pilot was conducted during April-May 2016 involving 101 blood tests in 14 SOC's for one month. The aim of the pilot was to explore whether clinics could effectively draw blood from patients who had their tests ordered at other clinics.

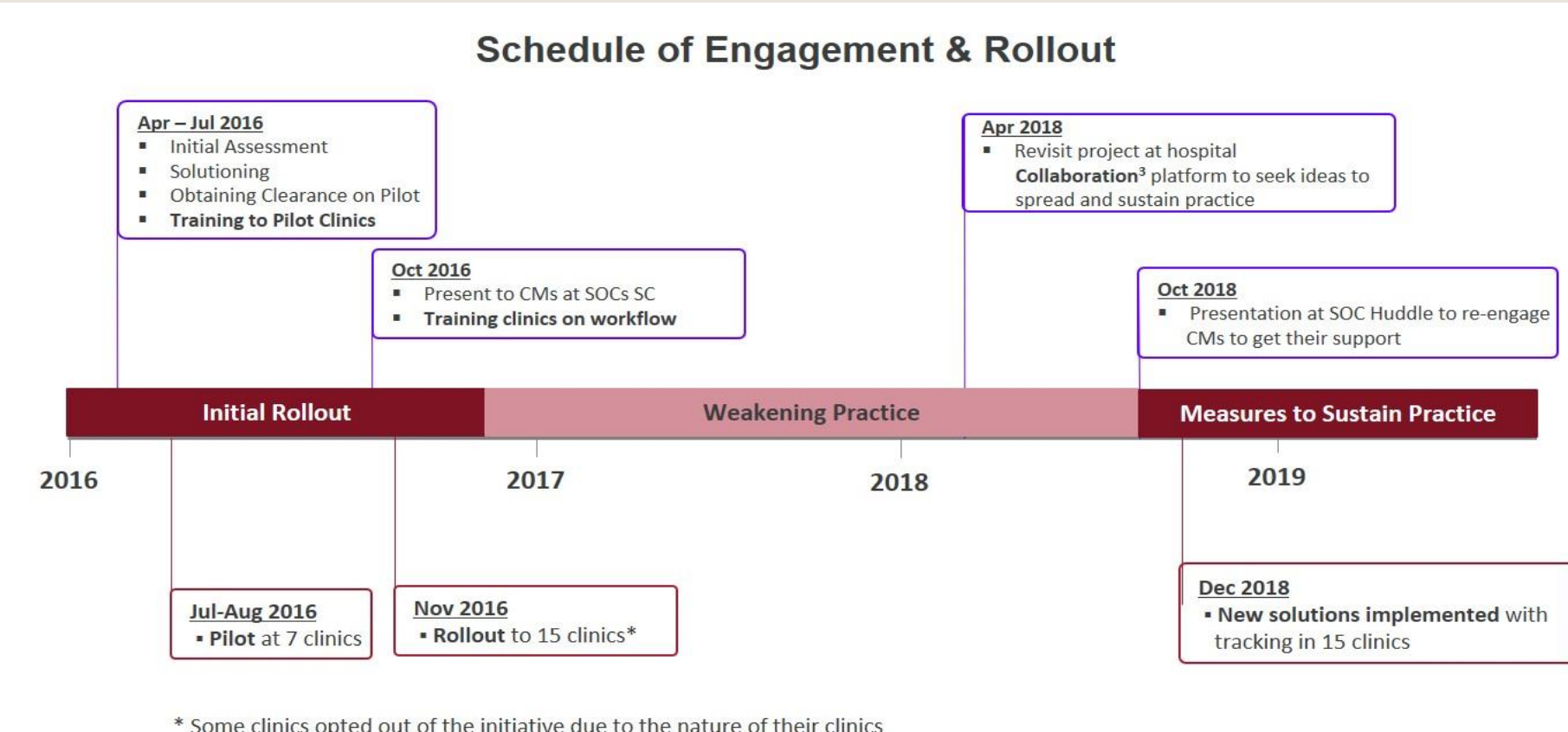
The Outpatient Management Unit (OMU) partnered with SOC's to formalize the process of inter-SOC blood drawing where patient is pricked only once. This project aimed to ultimately improve the patient experience by minimizing discomfort of multiple pricks, repeated waits and additional walking.

Approach



The team conducted a Cause-and-Effect Analysis to understand why patients had to draw blood multiple times and at multiple clinics. It was found that there was a **lack of standardized guidelines on how staff could draw blood on behalf of other clinics.**

The solution was to **develop guidelines** on when blood can be drawn on behalf of another clinic and **formalize the process.** For the scope of this project, the team targeted common blood samples: **Full Blood Count, Renal Panel, Liver Panel, Lipid Panel Glucose, Viral Load and CD4.**

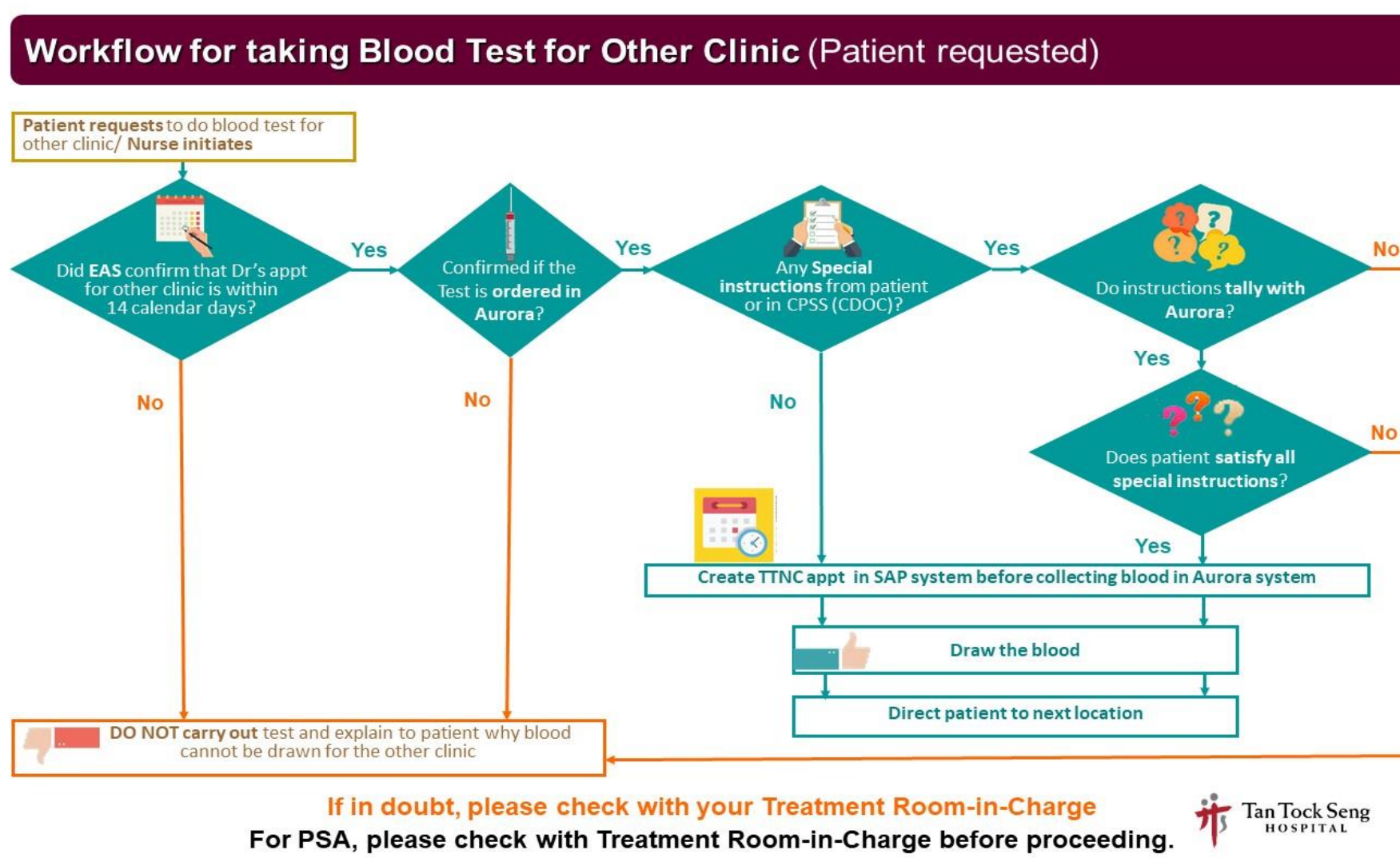


A second pilot was conducted between July-August 2016 before mass rollout in November 2016.

New measures were implemented to sustain the practice from December 2018. This included using an existing form to collect data easier and training of new SOC staff during orientation.

Implementation Plan & Solutions

- ### Implementation Plan
- Develop **Visual Cue** based on new **standardized workflow** to be displayed in SOC treatment rooms
 - Set **Exclusion Criteria** to draw blood seamlessly without error
 - Designate **Treatment Room in-charge (IC)** for every SOC as single point of contact
 - Provide **SOC Treatment Rooms Contact List** to each treatment room
 - Incorporate inter-SOC blood taking practice in **SOC Orientation Programme** for new hires*
 - Incorporate data collection into existing **Record of Laboratory Specimen Form***



1. Visual Cue of workflow

Exclusion Criteria
Please DO NOT draw blood for other clinics if:

- Duration
 - TCU is more than 14 calendar days
 - Blood OA is not the same date as the appointment date
 - Doctor instructed specific test date in Aurora
- System
 - No blood ordered in Aurora
- Diagnostics/Therapeutic
 - e.g. cortisol, therapeutic replacement (potassium, calcium etc), vancomycin, TB spot, PT/INR (ACC clinic)
- Special Instructions
 - Fasting is required
 - Blood test for chemo treatment
 - Blood test indicated specific collection time e.g. testosterone for sexual dysfunction condition

Clinic Treatment Room Contact Number

Clinic B2B	6357 3721 / 3732
Clinic 3B	6357 3771
Clinic 3A	6889 4516 / 4521
Clinic 2A	6889 4074
Clinic B1A	6357 7907
SOC J	6889 4120
Clinic 1A	6889 4079
Clinic B1B	6357 1080
ITC	6357 2553
FACE	6357 0275
Q/A	6357 1959
Breast Clinic	6889 4807
Clinic B/C	6357 2289
Clinic B	6357 7463
Eye/Atrium	6357 2226
HEC	6889 4216
Clinic 2B	6357 2666
The Heart Atrium	6359 104
GIM	6357 1080 / 5114
SOCK	6889 4326
/Contact Clinic	6889 4326
ITVC	6889 4315
Clinic 4A	6889 4416
Clinic 4B	6889 4416
Clinic 5B	6889 4575

4. SOC Treatment Room Contact List

Solutions to Further Promote Practice

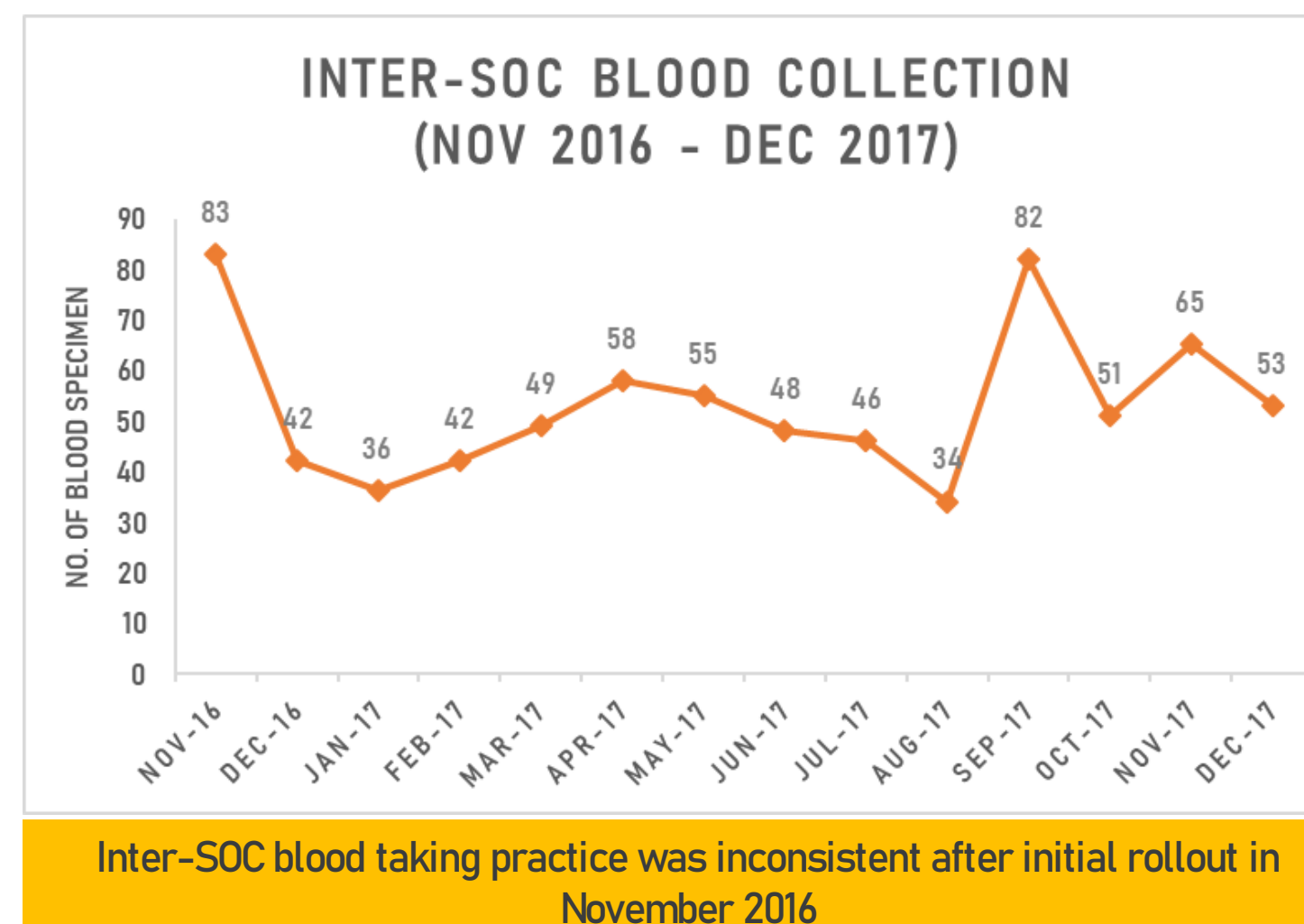


5. Incorporate practice in SOC Orientation Programme

6. Data collection through Record of Laboratory Specimen Form

CLINIC	RECORD OF LABORATORY SPECIMEN	DATE: / /																									
TT Time: C/A	<table border="1"> <tr><td>No. of Tests</td><td>FC</td><td>Type of Tests</td><td>Remarks</td><td>Specimen Dispatched</td></tr> <tr><td>Y</td><td>FC</td><td>FC</td><td></td><td>Time Sent</td></tr> <tr><td>P</td><td>FC</td><td>FC</td><td></td><td>Carrier No.</td></tr> <tr><td>B</td><td>FC</td><td>FC</td><td></td><td>Carrier No.</td></tr> <tr><td>Sign:</td><td>FC</td><td>FC</td><td></td><td>Carrier No.</td></tr> </table>	No. of Tests	FC	Type of Tests	Remarks	Specimen Dispatched	Y	FC	FC		Time Sent	P	FC	FC		Carrier No.	B	FC	FC		Carrier No.	Sign:	FC	FC		Carrier No.	
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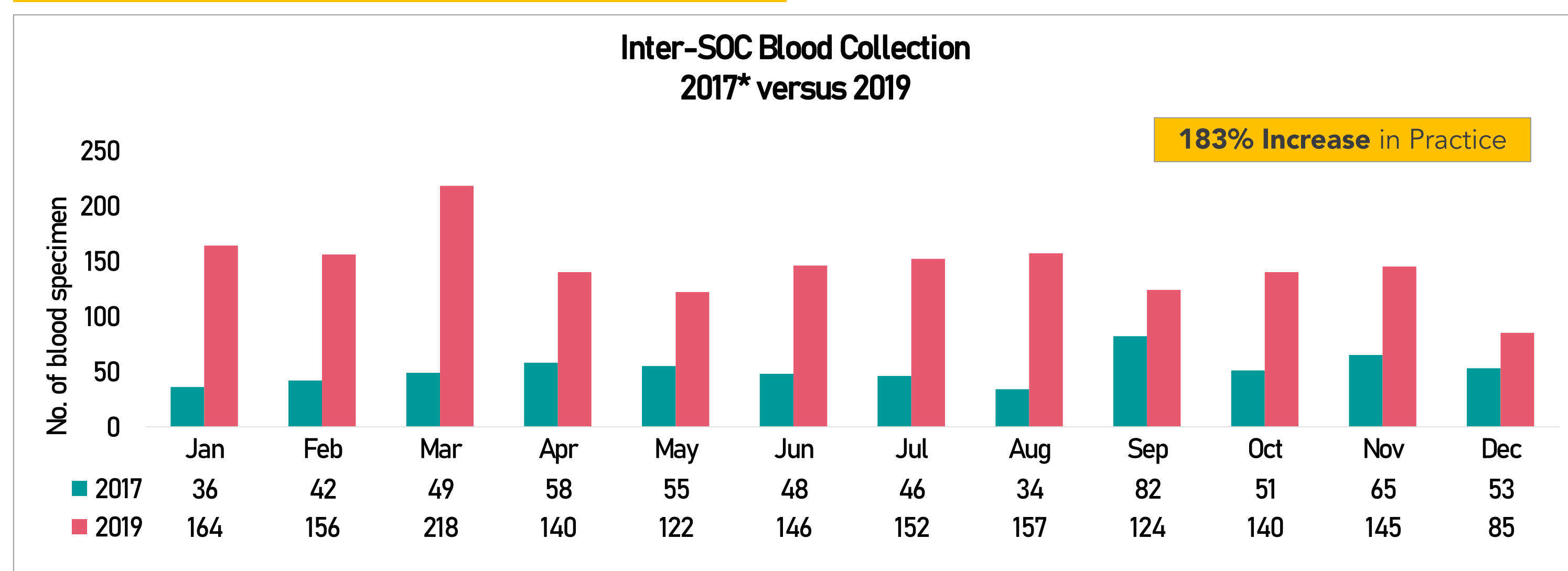
Results



Inter-SOC blood taking practice was inconsistent after initial rollout in November 2016

Description	Pre Roll-out April - May 2016 (1 month) 14 clinics	Post Roll-out Jan - Dec 2017 (12 months average) 15 clinics	Post Roll-out Jan - Dec 2019 (12 months average) 15 clinics
No. of Trips saved for patients	101	52	146
Wait Time saved for patients (27min/patient)	5.7 work days	2.93 work days	8.21 work days
Amount of time saved by other clinics (8min/patient)	1.7 work days	0.87 work days	2.43 work days
Cost savings (Tourniquet, gloves, alcohol swab, needle, disposable kidney dish, manpower) (\$6.37/new blood drawn)	\$643.37	\$331.24	\$930.02
Slots freed up for other patients (hospital level)	101 slots	52 slots	146 slots

Outcome Indicators by Month (1 work day = 8 hours)



*2018 data is not available for analysis

Description	Post Roll-out Jan - Dec 2017 (12 months) 15 clinics	Post Roll-out Jan - Dec 2019 (12 months) 15 clinics
No. of Trips saved for patients	619	1749
Wait Time saved for patients (27min/patient)	34.82 work days	98.38 work days
Amount of time saved by other clinics (8min/patient)	10.32 work days	29.15 work days
Cost savings (Tourniquet, gloves, alcohol swab, needle, disposable kidney dish, manpower) (\$6.37/new blood drawn)	\$3,943.03	\$11,141.13
Slots freed up for other patients (hospital level)	619 slots	1749 slots

Outcome Indicators by Year (1 work day = 8 hours)

Comparing 2017 with 2019, **For the Hospital,**

- ✓ 183% increase in slots freed up for other patients
- ✓ 29.15 work days saved by other clinics
- ✓ \$7198.10 increase in cost savings

Comparing 2017 with 2019, **For the Patients,**

- ✓ 183% increase in trips saved
- ✓ 98.38 work days saved in waiting time
- ✓ 1130 more patients pricked only once

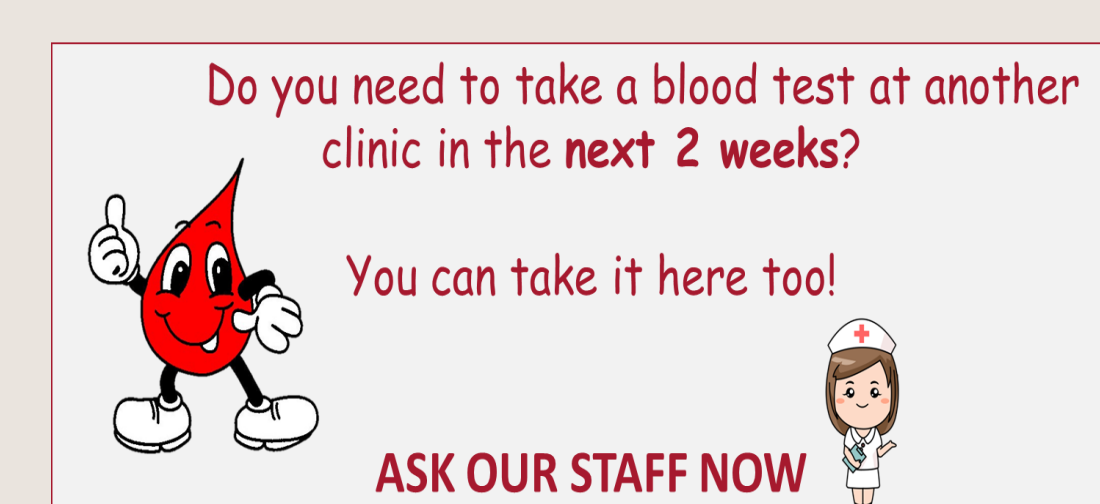
Strategies for Sustaining the Gains

This inter-SOC blood drawing process not only **benefits the patient** but also results in **cost savings for the hospital** from pricking the patient only once. Additionally, we are also able to **save time** and **slots at the clinic** when we take blood on behalf of another clinic resulting in a **system level improvement.**

The project team faced several challenges such as staff movement disrupting practice, difficulty in collecting manual data, missing data and patients possibly being unaware of inter-SOC blood taking initiative. Hence, further enhancements are required to improve inter-SOC blood taking.

To **sustain the gains** the team has made, some future plans include:

- Ensuring every clinic has the required **visual cues** displayed in treatment rooms
- Ceasing manual recording and use **EGIS Collection Module (ECM)** – a new sample-taking module in Epic for tracking of practice
- Communicating about this practice during **SOC Orientation Programme** for new hires to maintain practice
- Improving patient awareness to facilitate patient-requested inter-SOC blood drawing through **posters** in clinics



* Solutions implemented from December 2018 to further drive practice