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:

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- Sr Neo Chee Hoon (SNM, Endoscopy Centre)

- Sr Ng Cheng Suan (NEII, OMU)

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- 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

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

Team Members: Karen Rajoo D/O Gomathy, Jamilah Jantan, Neo Chee Hoon, Ng Cheng Suan, Bavani Deyvi, Zuhaidah Bte Ahmad Dan, Mohamed Maliki Bin Mohamed Nasir, Peck Xin Hui, Lim Hui Pin, Mohamed Razeen Bin Samsudeen

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 SOCs 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 SOCs 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.
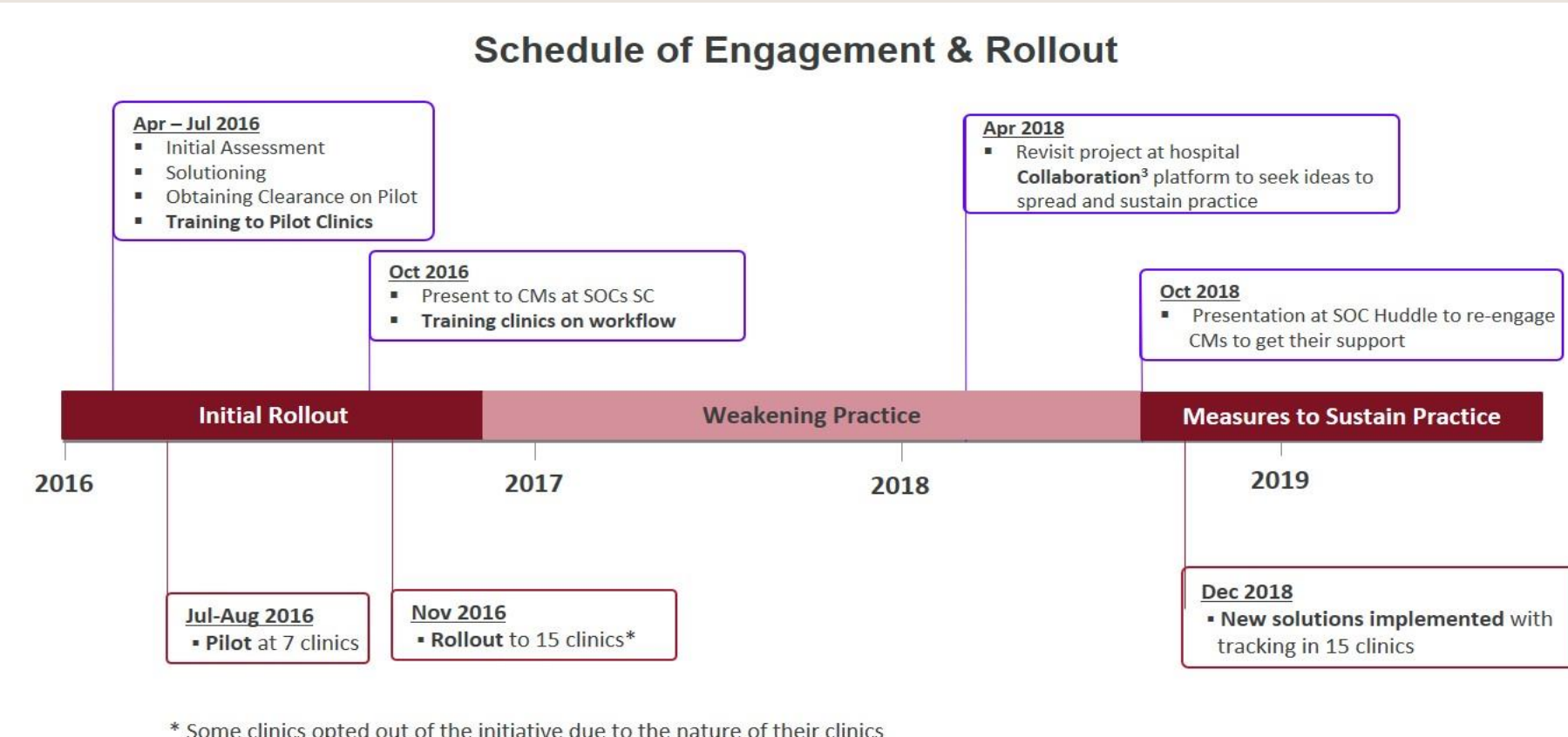
Approach
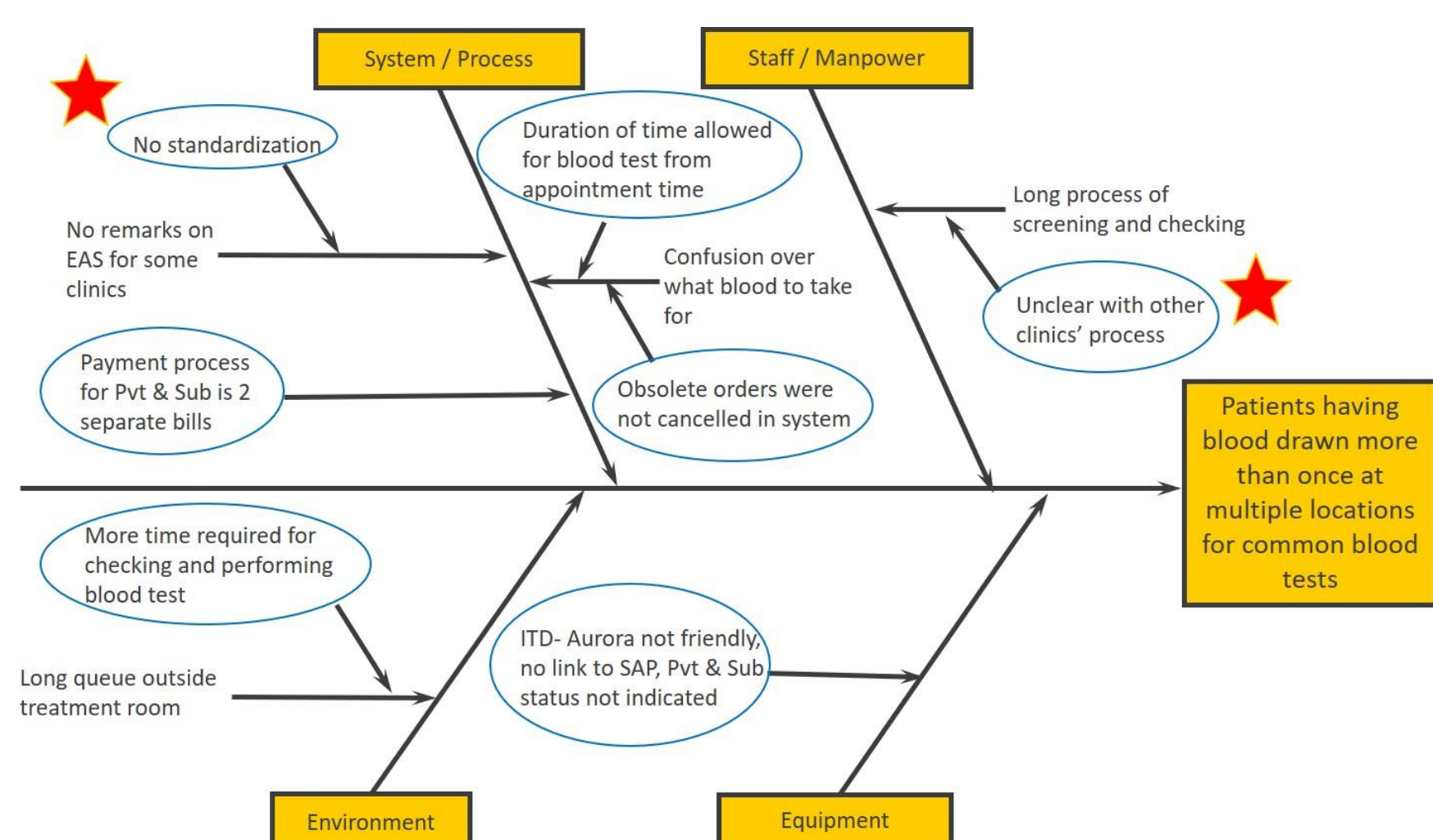
The team conducted a Cause-and-Effect Analysis to **understand why patients had to draw blood multiple times and at multiple clinics**.

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**.

Schedule of Engagement & Rollout

Apr – Jul 2016
- Initial Assessment
- Solutioning
- Obtaining Clearance on Pilot
- **Training to Pilot Clinics**

Oct 2016
- Present to CMs at SOCs SC
- Training clinics on workflow

Apr 2018
- Revisit project at hospital Collaboration* platform to seek ideas to spread and sustain practice

Oct 2018
- Presentation at SOC Huddle to re-engage CMs to get their support

Jul-Aug 2016
- **Pilot** at 7 clinics

Nov 2016
- **Rollout** to 15 clinics*

Dec 2018
- **New solutions implemented** with tracking in 15 clinics

Initial Rollout (2016) — Weakening Practice (2017, 2018) — Measures to Sustain Gains (2019)

* Some clinics opted out of the initiative due to the nature of their clinics

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

* Solutions implemented from December 2018 to further drive practice

Workflow for taking Blood Test for Other Clinic (Patient requested)
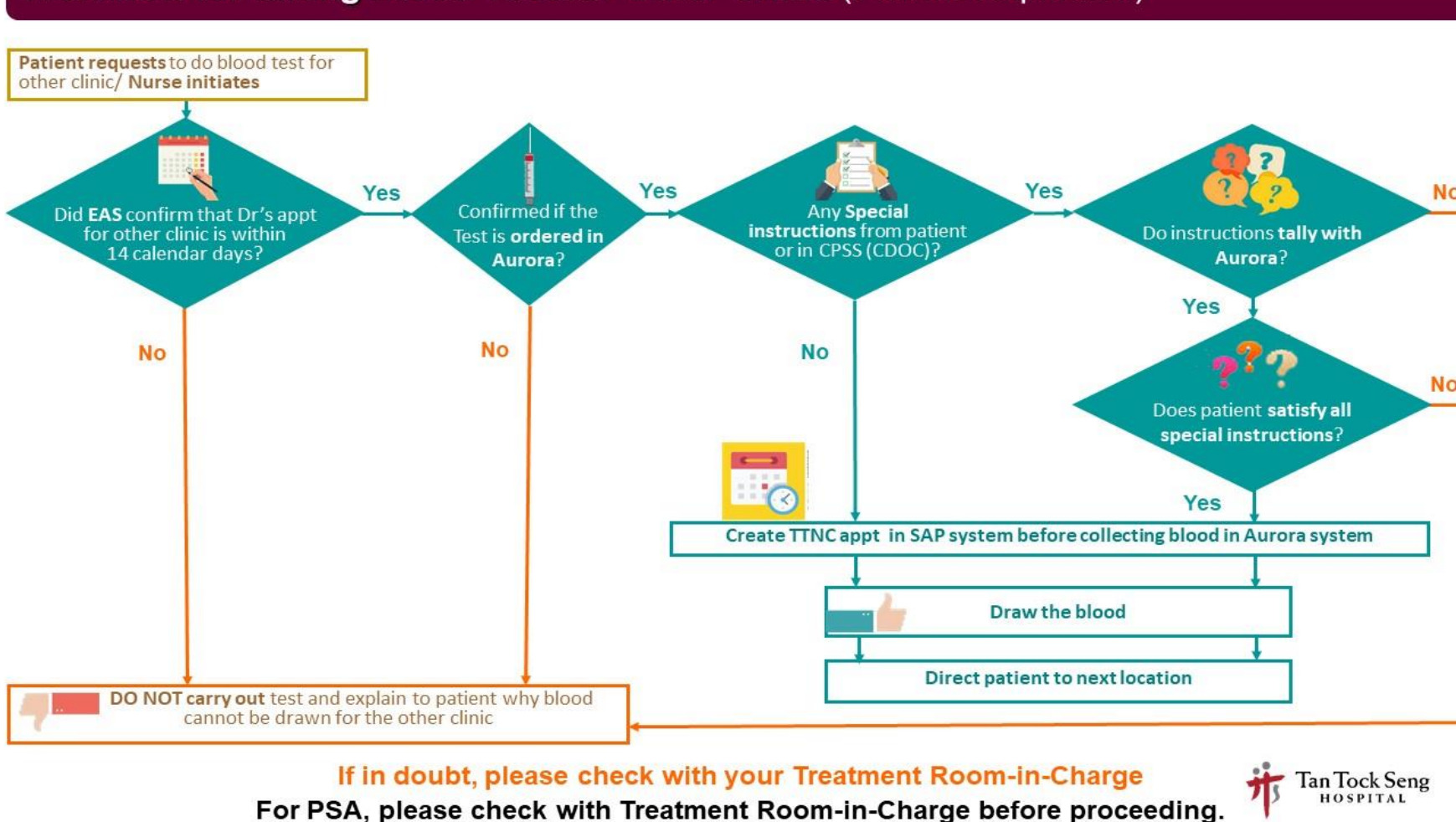
1. Visual Cue of workflow

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/ Theraputic
- 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

Intra SOCs blood taking for common groups of blood tests
FBC | Renal Panel | Liver Panel | Lipid Panel | Glucose | Viral Load | CD4

2. Exclusion Criteria

Clinic Treatment Room Contact Number

Clinic	Contact
Clinic B2B	63573731/3732
Clinic 3B	63573771
Clinic 5A	68894516/6521
Clinic 2A	68894274
Clinic B1A	68894019
SOC J	63577907
Clinic 1A	68894120
Clinic B1B	68894079
RTC	63575980
F-ACE	63572553
OFAT	63578275
Breast Clinic	63573759
Clinic B1C	68894807
Clinic 1B	63577289
Eye Atrium	63572463
HEC	63572226
Clinic 2B	68894236
The Heart Atrium	63572666
GKM	63596104
SOCK /Contact Clinic	SOCK–65115108 / 5114 Contact Clinic–63577412
THVC	68894438
Clinic 4A	68894315
Clinic 6B	68894416
Clinic 5B	68894575

4. SOC Treatment Room Contact List
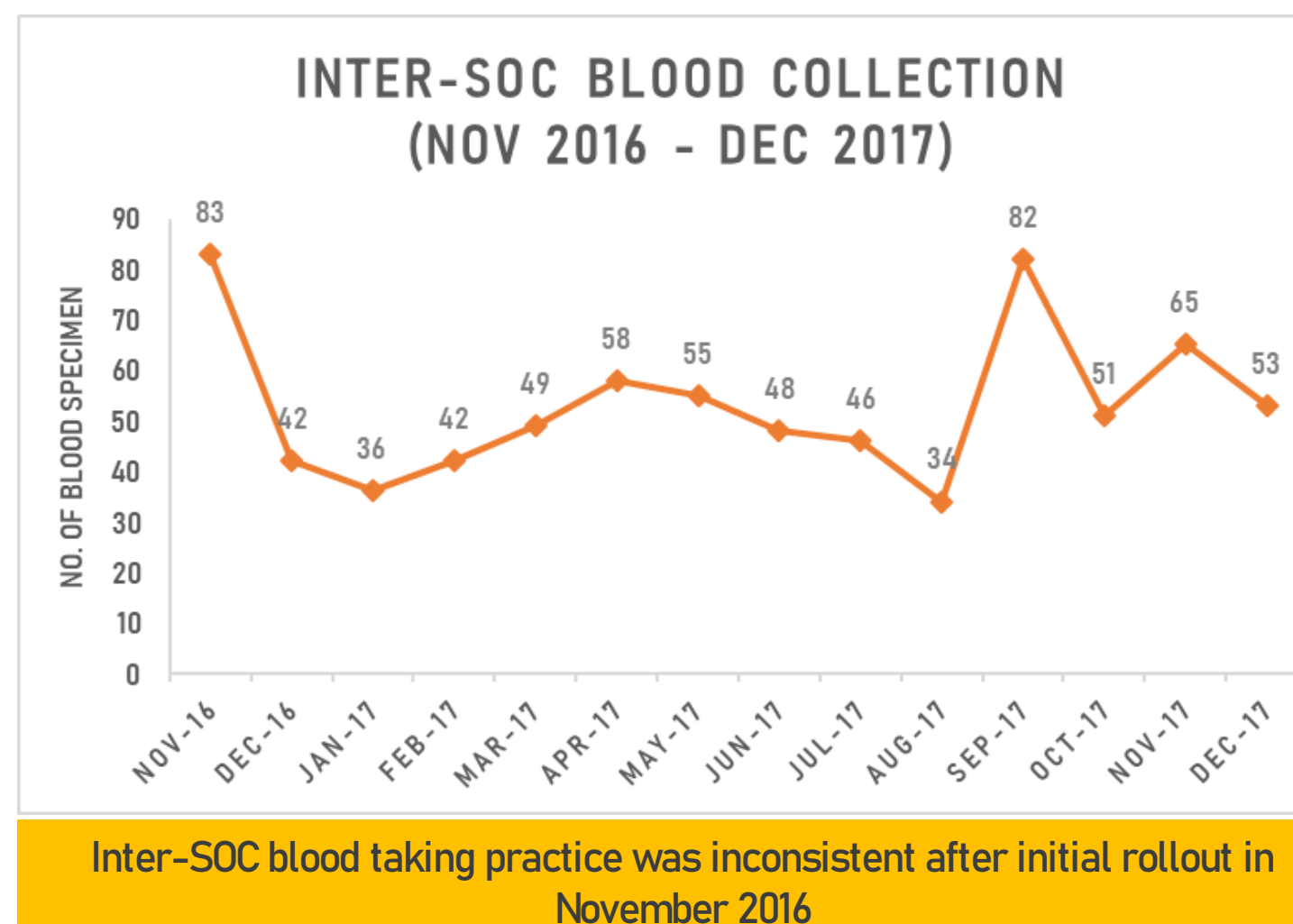
Solutions to Further Promote Practice

5. Incorporate practice in SOC Orientation Programme

6. Data collection through Record of Laboratory Specimen Form

Results

INTER-SOC BLOOD COLLECTION (NOV 2016 – DEC 2017)

NO. OF BLOOD SPECIMEN

Values by month: NOV-16: 83, DEC-16: 42, JAN-17: 36, FEB-17: 42, MAR-17: 49, APR-17: 58, MAY-17: 55, JUN-17: 48, JUL-17: 46, AUG-17: 34, SEP-17: 82, OCT-17: 51, NOV-17: 65, DEC-17: 53
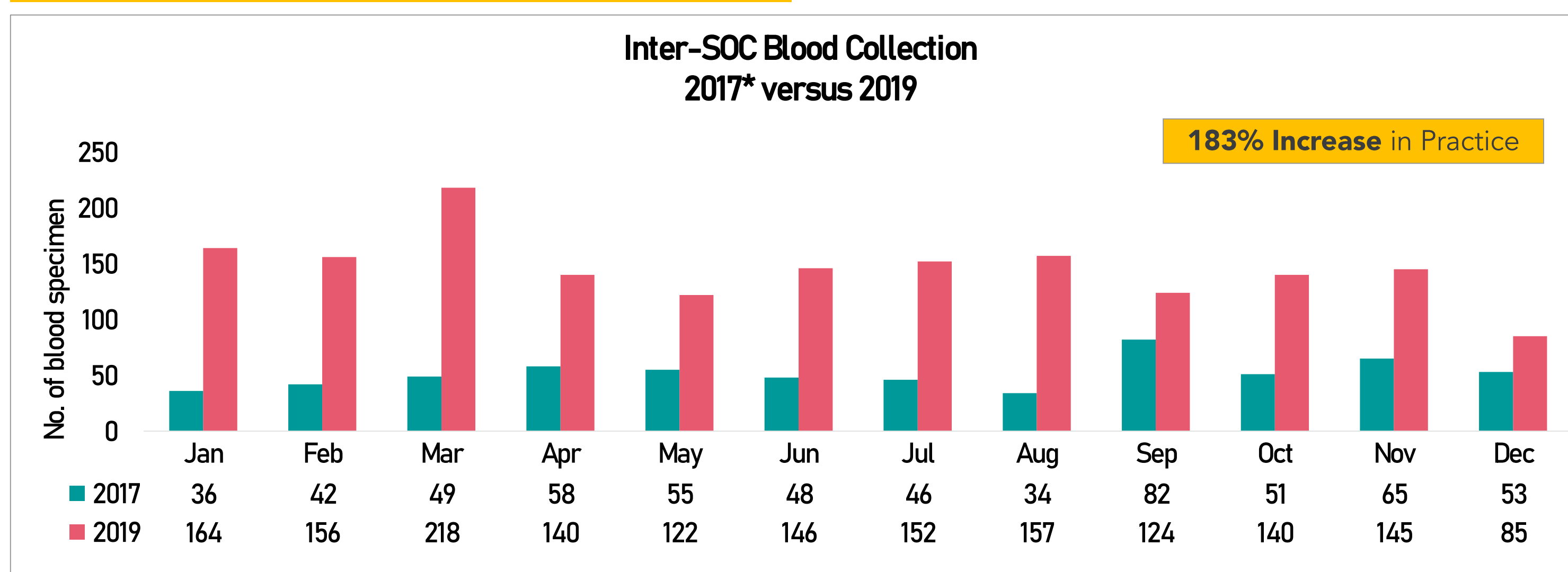
Inter-SOC blood taking practice was inconsistent after initial rollout in November 2016

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)

Inter-SOC Blood Collection 2017* versus 2019

No. of blood specimen

183% Increase in Practice

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	36	42	49	58	55	48	46	34	82	51	65	53
2019	164	156	218	140	122	146	152	157	124	140	145	85

*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

Do you need to take a blood test at another clinic in the next 2 weeks?

You can take it here too!

ASK OUR STAFF NOW