

## Background

Conventionally, doctors would fill up a manual charge form to bill for their specialist review and hand the form over to the ward PSA for charging. Very often, the manual charge forms were incomplete/illegible/not filled in/lost in transit. PSAs would spend time checking with nurses/doctors or look through case notes for blue letter referral. This process led to:

- Blue letters not being charged on time
- Wrong charge codes are used

PSC will liaise with Business Office to open bill for amendments in order to rectify patient's bill. With the blue letter referral going electronic, the charging process was reviewed to streamline and minimize charging errors.

## Aim

- Reduce time spent checking with nurses/doctors for manual charge form
- Reduce time spent on manual blue letter charging

As-Is	To-Be
Doctor orders blue letter referral using manual form	Doctor orders blue letter via SCM
1. Blue Letter Form	1. Specialist replies via SCM
2. Manual Charge Form	2. PSA charges in SAP
3. Referring doctor calls/fax for specialist opinion	3. Supervisor view task to confirm charges and accuracy
4. Specialist responds to the blue letter, completes the manual charge form and files in case note	
5. Nurse brings charge form to PSA for charging	
6. PSA charges in SAP	
7. PSA submits manual charge form to supervisor for verification	

## Method

PDCA cycle was applied to review the blue letter charging process.

A team was formed together with Office of Clinical Informatics (OCI).

We found the root cause and implemented a solution using Sunrise Clinical Management (SCM) to trigger a task list for PSA to charge at real time.

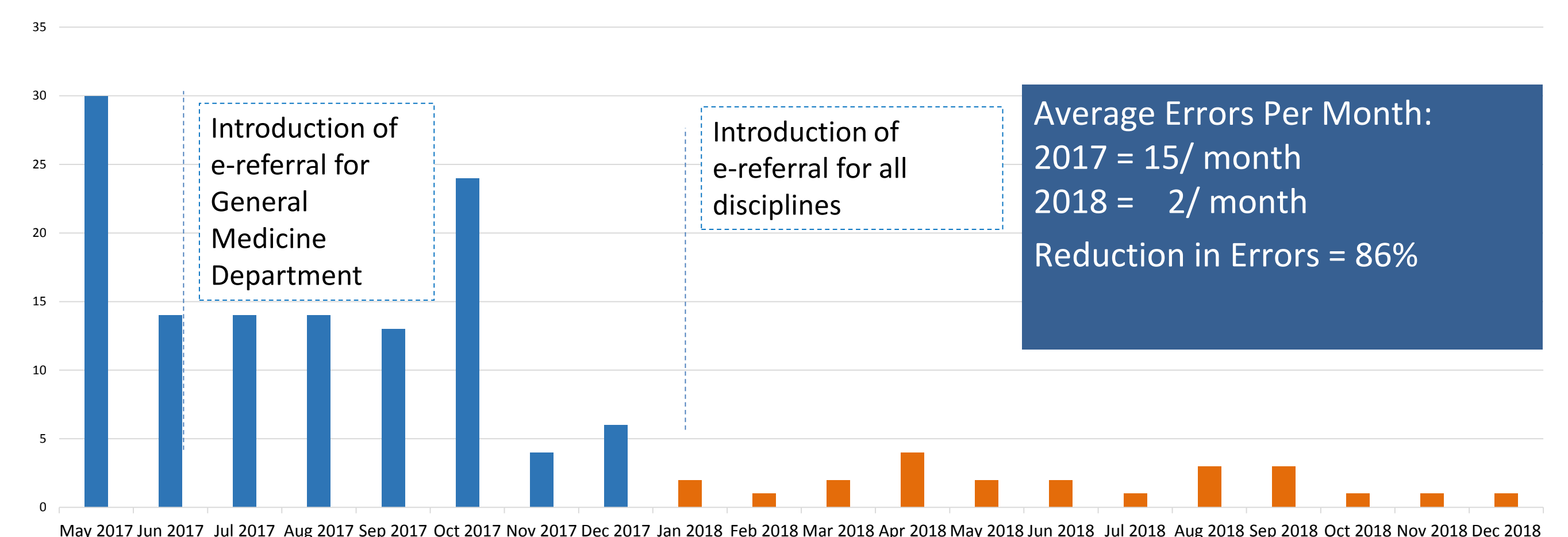
Permission was granted for PSAs to have access to SCM to facilitate this new workflow. OCI communicated the implementation to doctors and in-service and hands-on training were conducted for PSAs.

In June 2017, the e-referral and charging process were piloted in general medicine department. During the pilot, all blue letter charges were monitored closely to ensure zero dropped charges. Full implementation was spread to all disciplines in January 2018.

## Results

### 1. Reduction in blue letter errors by **86%**

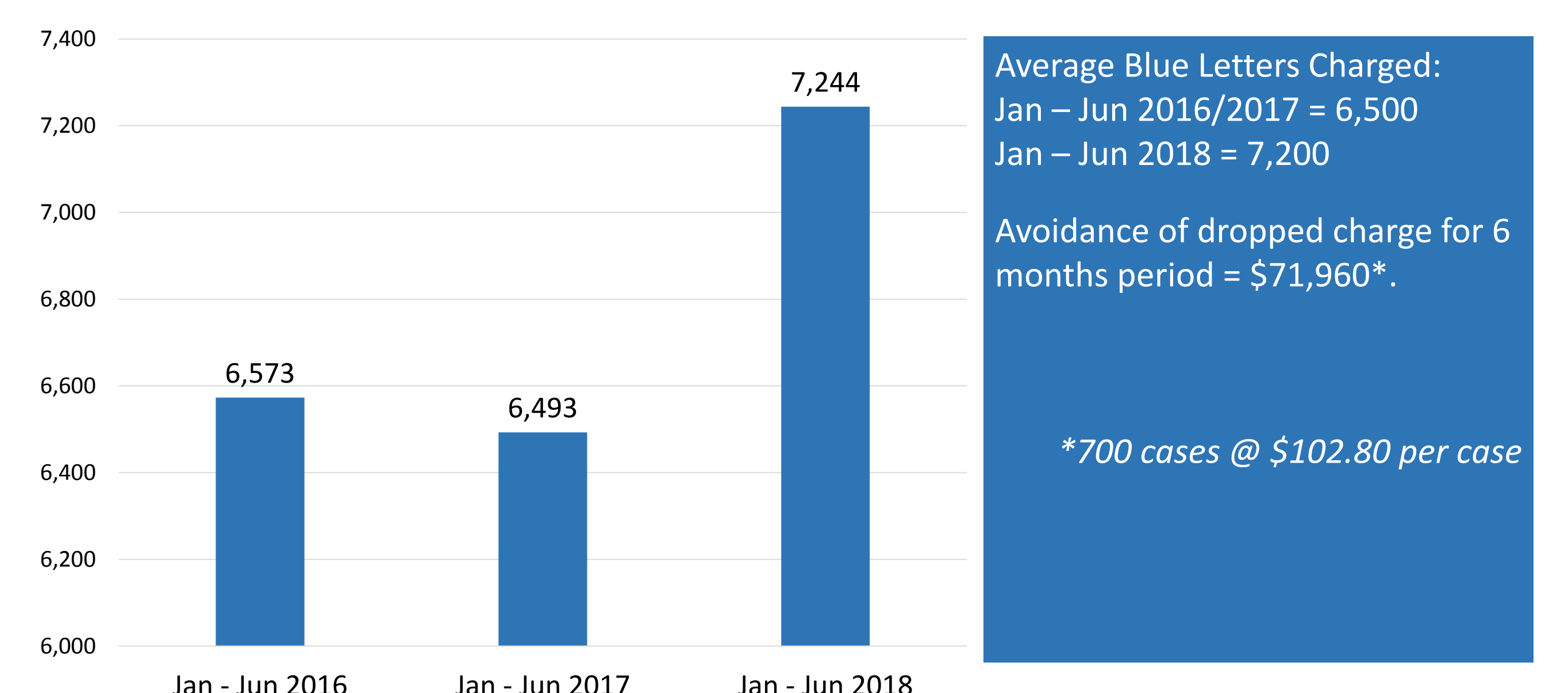
Data provided by Quality & Risk Management






### 2. Reduction in time spent on blue letter charging : **1,983hours**

Estimated 14,000 blue letters per year	Before	After	Savings
Nurses time = 50% of charge forms	5 Minutes (35,000 mins)	0	1,983 man hours
Time taken to raise blue letter charge forms by doctor	5 Minutes (70,000 mins)	0	
PSC & Business Office time for bill adjustment = 20% of charge forms	5 Minutes (14,000 mins)	0	

### 3. Reduction in dropped charges : Data provided by Finance



## Project Impact

	<b>For Patient</b> Reduction in billing errors by <b>86%</b> ( Eliminate complaints for late & over charging )
	<b>For Staff</b> Time savings of <b>1,983</b> hours per year ( Assuming 14,000 blue letter referrals )
	<b>For Organization</b> Avoidance of dropped charges amounting to <b>\$144,000</b> per year

## Conclusion

This is a hassle-free process that saves time & resources, increasing patients' satisfaction, revenue and savings on manpower resources.

In January 2019, we implemented e-referral SOC appointment booking using the same solution.