



**Singapore Healthcare Management 2016**

# Demand Productivity and Optimization of Resources for Cardiology Outpatient Services in Tan Tock Seng Hospital (TTSH)

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## Objectives

TTSH Department of Cardiology (TTSH CVM) strives to provide a comprehensive service and ensure the deliverance of patient-centric care in a safer, more efficient and cost-effective manner by:

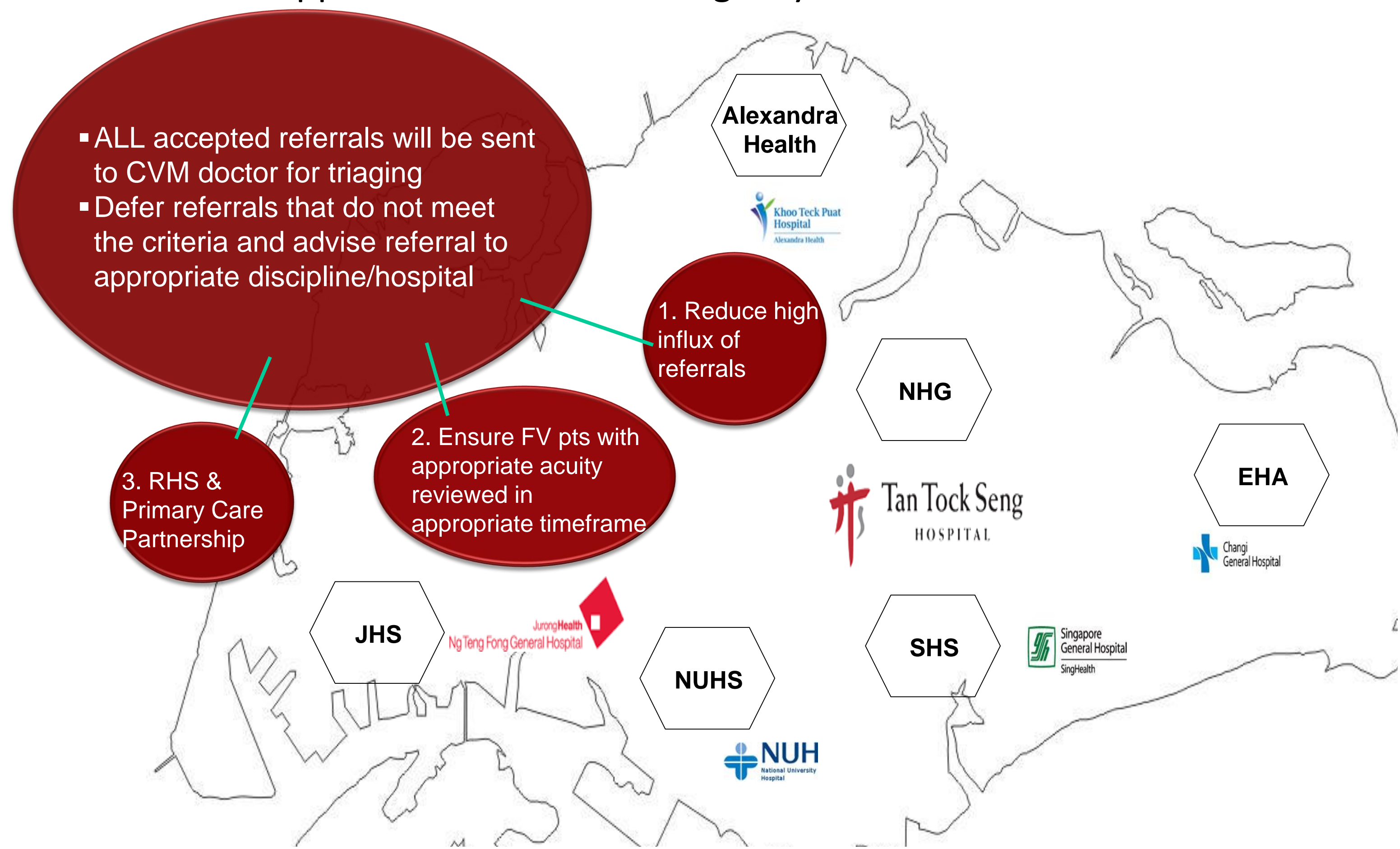
- 1) ensuring patients with appropriate acuity are reviewed in appropriate timeframe
- 2) reducing inappropriate demand referrals and increasing demand productivity
- 3) optimizing limited resources

## Methodology (I)

TTSH CVM successfully increased its demand productivity by reducing inappropriate referrals through:

### 1) Prioritization of First Visit (FV) Subsidized Referrals

- Defined geographic area and population catchment to facilitate delivery of care.
- Give FV CVM appointments based on urgency.



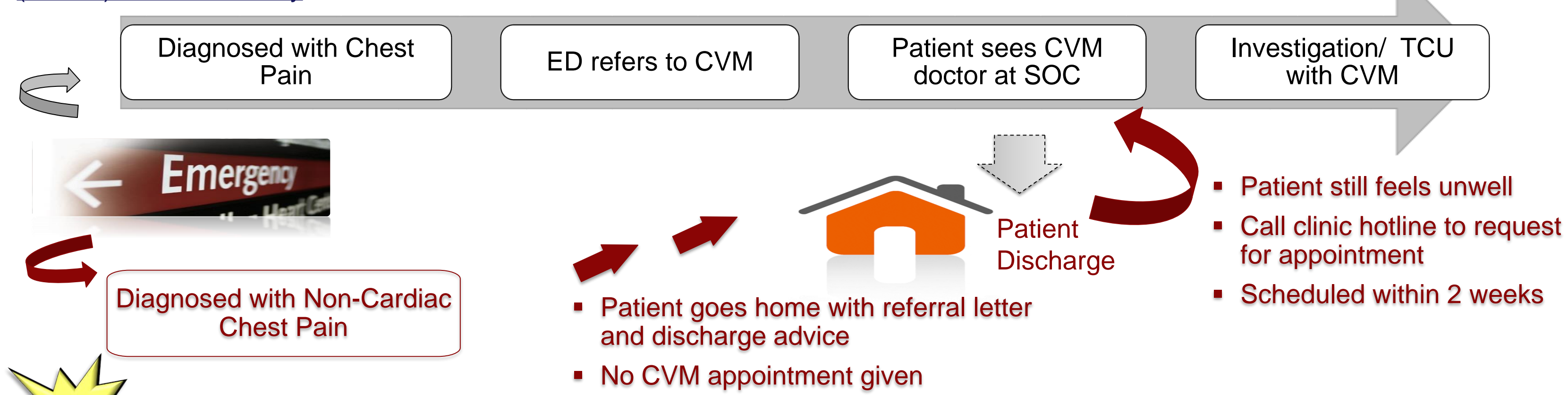
### 2) ECG Tele-Consultation

- In collaboration with National Healthcare Group Polyclinics (NHGP) to reduce unnecessary polyclinic referrals for ECG consults in asymptomatic patients.
- For asymptomatic patients with ECGs which the NHGP doctors are unsure of in terms of interpretation or the need for referral, they send ECG report to TTSH Cardiologist for advice. Only those who require specialist evaluation after appropriate screening are then referred to TTSH Cardiologist.

### 3) Emergency Department (ED) Discharges with 3 Months Open Date

- ED doctors discharge non-cardiac chest pain patients home with 3 months open date with no FV CVM appointment given, reducing unnecessary FV referrals and defaulter rates.

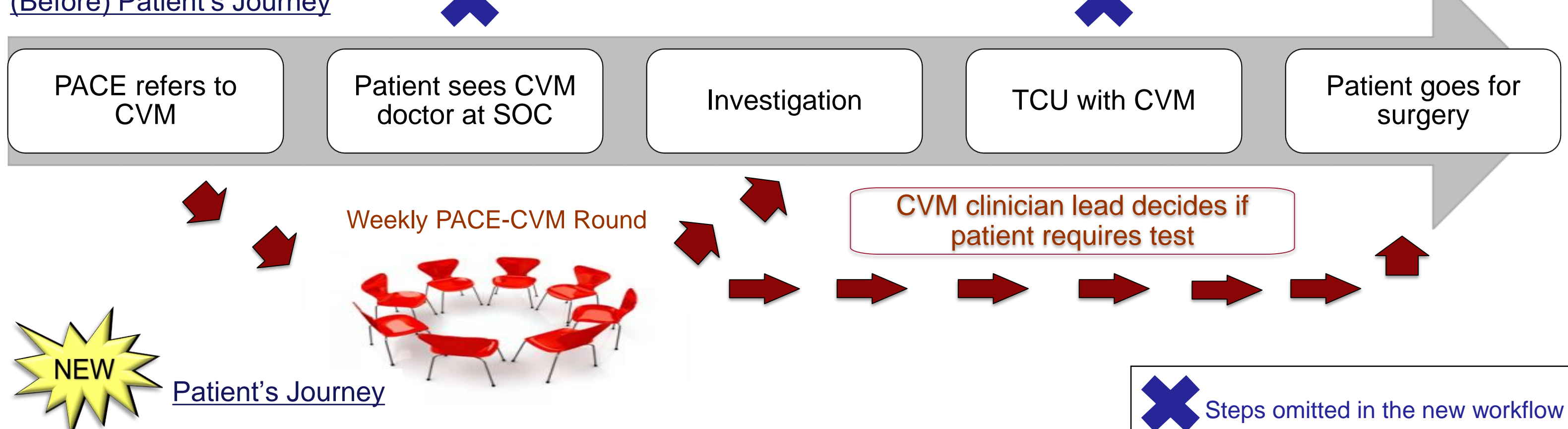
(Before) Patient Journey



### 4) Pre-Admission Counselling and Evaluation (PACE) – CVM Rounds

- CVM doctor screens referrals from PACE and orders stress test/s at weekly PACE-CVM rounds, reducing unnecessary consultations and inconvenience for patients.

(Before) Patient's Journey

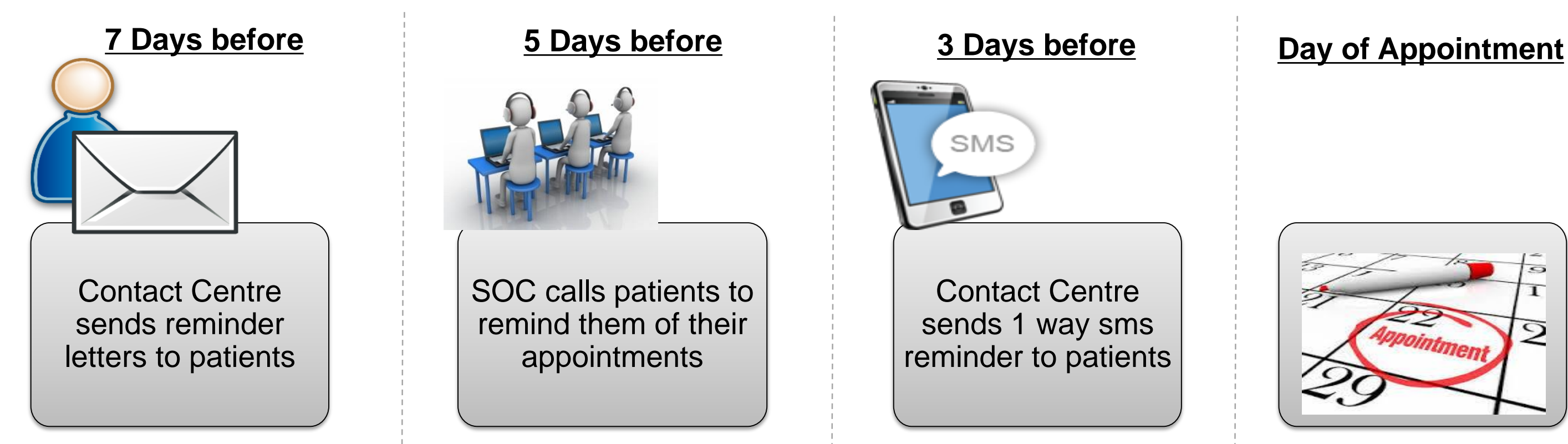


## Methodology (II)

Defaulter rate was reduced and appointment slots were optimized through:

### 1) Reminder Notification to Patients

- Reminds patients to attend appointments, replacing those who cancel/reschedule appointments with other urgent FV cases.



### 2) Defaulter Workflow Review

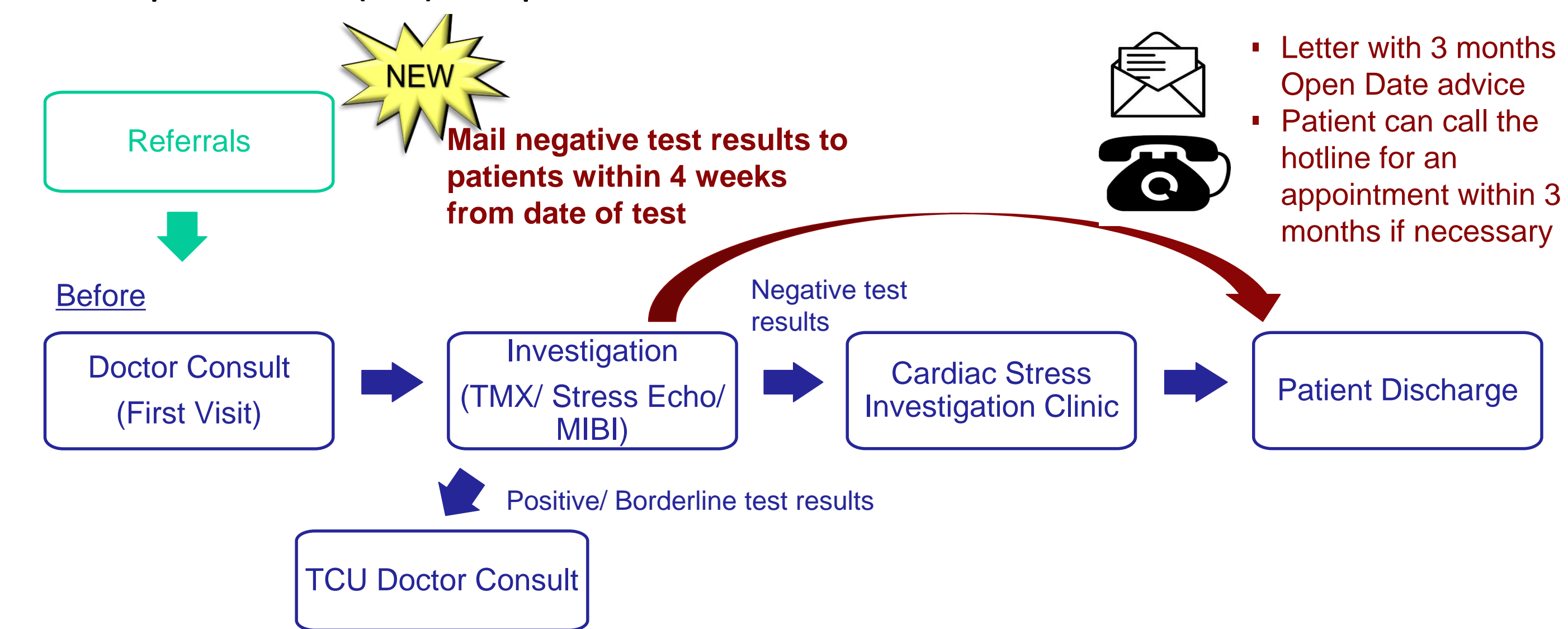
- Clinic staff calls and reschedules appointment for first time FV defaulters.
- First time FV defaulters who do not respond to the call will not get a new appointment.

### 3) ED Ring-fenced Appointment Slots

- Number of ring-fenced appointment slots for ED referrals reduced from 14 FV to 10 FV slots per day.
- Reduced appointments slots will be used for more urgent cases or to bring forward other FV appointments.

### 4) Mailing of Negative Stress Test Results

- Informs patients' negative test result of Cardiac Stress Investigation by snail mail, with 3 months Open Date advice, instead of scheduling a Repeat Visit (RV) for patient.



## Results

**Total Average Savings of 3648 FV Demand and 972 RV per year**

## Conclusion

Patients expect high quality, integrated care, as well as affordability and accessibility of such care. Through increasing demand productivity and optimization of resources, TTSH CVM is able to continue to achieve clinical excellence and maintaining operational efficiency to enhance patients' experience and provide patient-centric care to the population.

