



Front Loading & Open Access of Cardiac Diagnostic Tests in NHCS

Collaborate, Utilise Capacity & Meet Demand

Singapore Healthcare Management 2016

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BACKGROUND

Waiting times for Cardiology SOC have been a long-standing concern and there is a considerable gap between high demand and limited SOC capacity to see new patients. This led to measures such as opening Saturday clinics for subsidised patients and running additional short-term clinic sessions.

Our analysis of referrals of new cases shows that patients are generally low risk.
 → No significant abnormalities are detected in 70% of the cases
 → Only 5% undergo coronary angiography

These low risks patients can potentially be decanted to the primary care for follow up, freeing up valuable slots for chronic cases.

Reasons for high number of referrals of low risk patients include concerns about missing underlying heart disease, limited confidence of primary healthcare physicians in deciding which patients need referral, and lack of capacity to order cardiac tests at primary healthcare level. Diagnosis of heart disease and selection of tests often requires an estimation of the likelihood of heart disease, something difficult to do in the absence of decision support tools and in a busy high volume primary care clinic.

OBJECTIVES

Collaborate with primary healthcare providers to ensure better utilisation of SOC capacity to meet the increasing demand for cardiac care.

Maximise the 1st SOC visit
Reduce 2nd SOC visits

RESULTS

Front Loading:

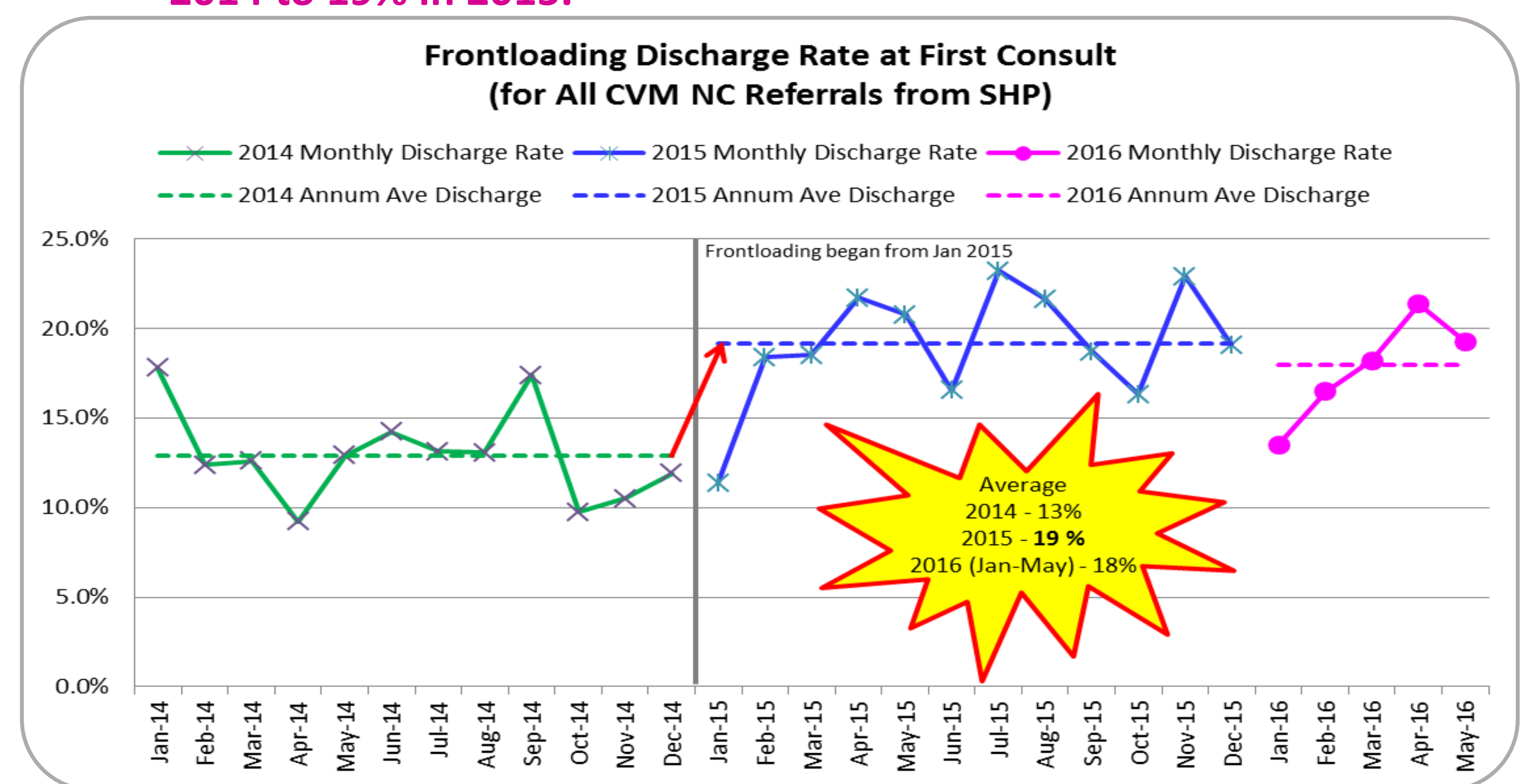
As at March 2016, a total of 1,478 patients had their cardiac diagnostic tests front loaded, **cutting down** to an equivalent of **1478 consultation visits** over 15 months.



This **frees up** an average of **99 consultation slots per month** for other chronic cases patients.



The front loading protocol also resulted in **higher rate of discharge** at first consultation visit for all SHPs referrals to NHCS Cardiology, from **13% in 2014 to 19% in 2015**.



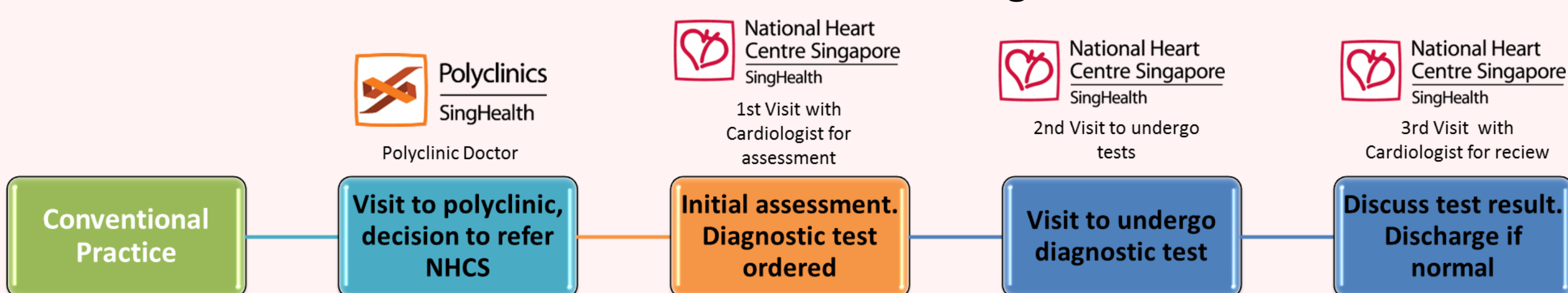
Open Access:

As of May 2016, 179 diagnostic tests were ordered by SHP doctors under open access protocol. Out of 130 diagnostic tests completed, **72% of these test results were within normal limits** and patients continue their follow up care at SHPs, and only 28% had abnormal findings and required specialist care at NHCS.

METHODOLOGY

NHCS collaborated with SingHealth Polyclinics (SHPs) to implement structured protocols of front loading and open access of cardiac diagnostic tests for patients referred from SHPs whom fulfilled pre-defined criteria.

In conventional practice, cardiologists would assess patients and order diagnostic tests during patients' first consultation visits at SOC. Patients had to return for a second consultation to discuss their diagnostic test results.

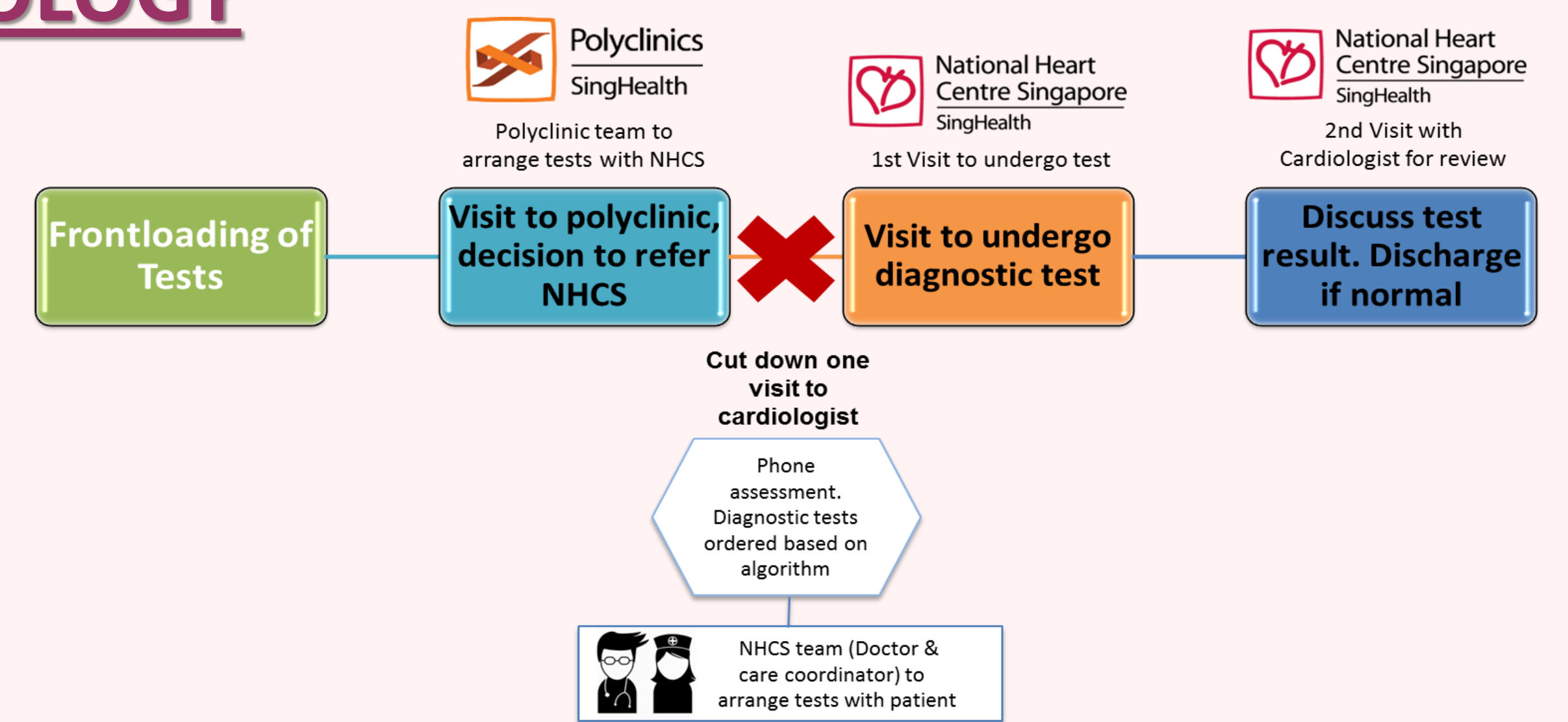


Front Loading Protocol

Front Loading Protocol leverages on a team of NHCS nursing and medical staff to review referral letters and ECGs of the targeted group of patients before ordering diagnostic tests to be done prior to patients' first consultation visit. Test results would then be ready for discussion with cardiologists during their first visit. This protocol saves one consultation visit for patients and patients with normal test results can be discharged to primary care. The Front Loading Protocol underwent a pilot phase from 15 to 31 December 2014 for patients referred from Outram Polyclinic. The first phase was implemented in January 2015 for all patients referred from the 9 SHPs.

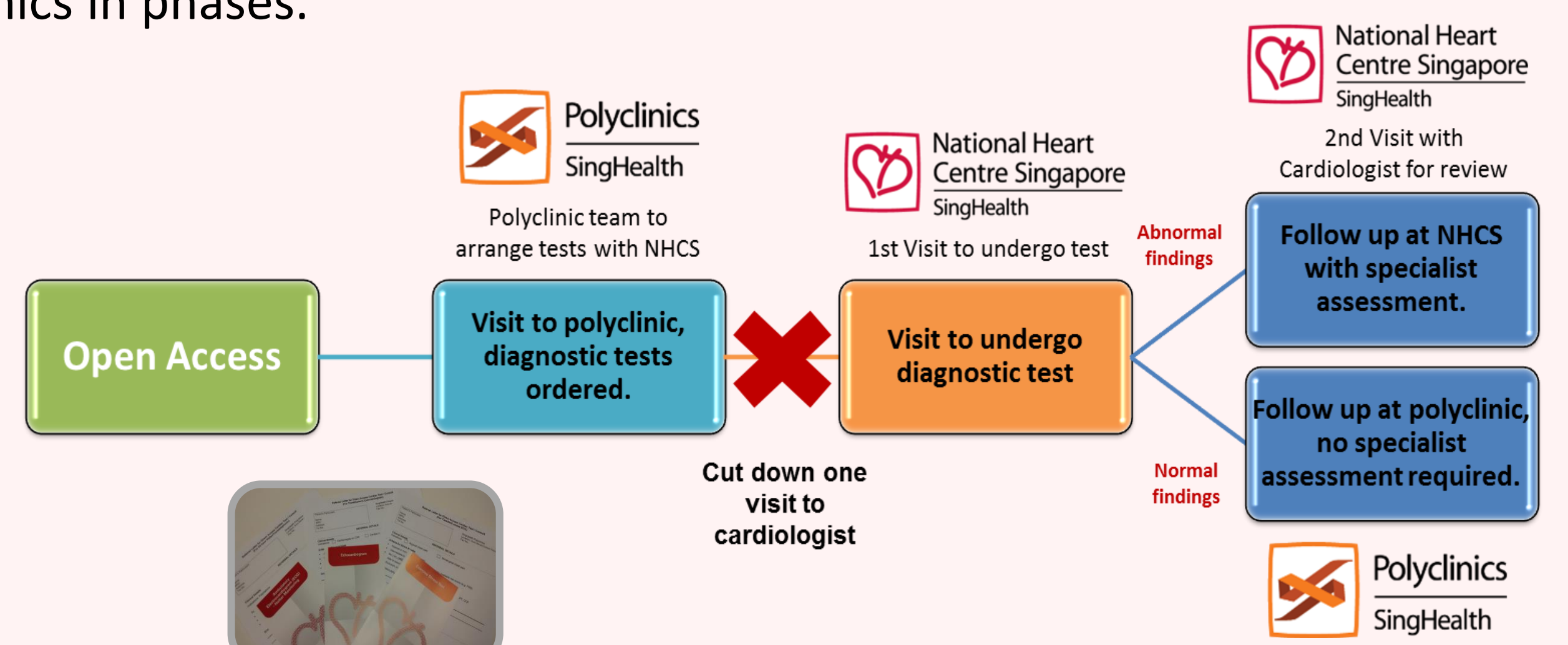
FOLLOW UP & SUSTAINABILITY

The Open Access Protocol will be implemented in phases. It was piloted with Outram and Bukit Merah Polyclinics from 06 July 2015 and was extended to Marine Parade and Sengkang Polyclinics since May 2016. Subsequently, It will be extended to all Polyclinics.



Open Access to primary care to Order Cardiac Diagnostic Tests in NHCS

Open Access Protocol was piloted with Outram and Bukit Merah Polyclinics from 06 July 2015. With this protocol, SHP doctors will order diagnostic tests directly from NHCS Cardiac Laboratory for suitable patients based on a set of algorithm established by cardiologists. Patients with normal test results will continue their follow-up care at the SHPs, and only patients with abnormal test findings would be given CVM appointments at NHCS. This protocol has been extended to Marine Parade and Sengkang Polyclinics since May 2016. It will be extend to all polyclinics in phases.



ACKNOWLEDGEMENT

Prof Terrance Chua & SingHealth Polyclinics Colleagues (Dr Derek Tse & Ms Michelle Jill Ng)

CONCLUSION

With the Front Loading and Open Access Protocols, time to cardiac diagnostic tests for targeted group of patients has been shortened, and number of consultation visits per patient has been reduced. As a result, the SOC capacity at NHCS is freed up to treat patients that require cardiac interventions.