

Reducing Wait Time from Referral to Admission

Dr Marilou Ebreo, Dynn Leong, Chin Hock Tan, Geraldine Chua, Peter Low
St Luke's Hospital

Background

St. Luke's Hospital (SLH) like other community hospitals accepts referrals for transitional care particularly in rehabilitation, wound care, IV antibiotics, dementia and palliative care. Referrals from acute and tertiary hospitals take 2-3 hours to process per patient, but total lead times averaged 3.8 days and occasionally exceeded 10 days.

While SLH has improved wait times from 4.6 days in 2019 to 3.8 days in 2023, further reductions are crucial. Timely admissions enhance patient satisfaction, improve health outcomes, and strengthen trust with referring institutions. For SLH, streamlined processing optimizes bed utilisation, staffing, and resource allocation while supporting acute hospitals in reducing ward congestion and emergency department overcrowding.



Fig. 1: Wait Time to Admission (WTA)

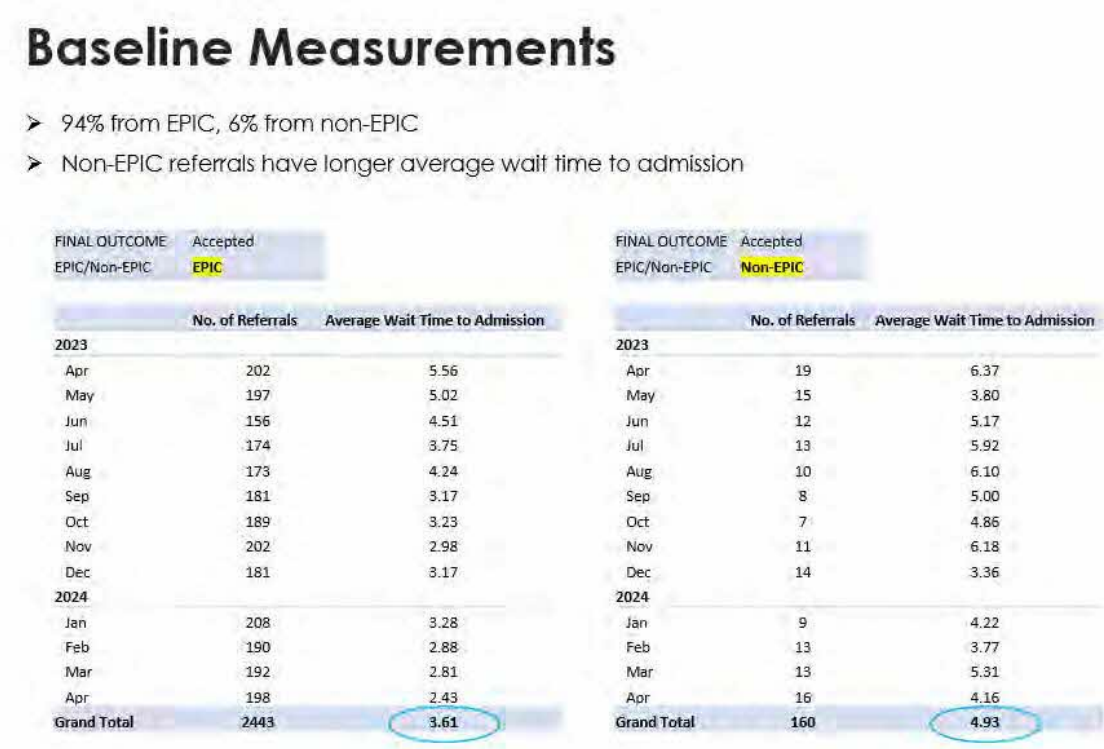


Fig. 2: WTA: EPIC vs Non-EPIC

Project Objectives

We aim to reduce the average wait time (WT) from referral to admission from 3.8 days to 2.6 days by September 2024.

Problem Analysis

The team utilized Lean Management tools, including the Gemba Walk and Value Stream Map, to thoroughly understand the referral and bed management processes. This approach helped identify factors which caused delays or prolonged wait times from referral to admission. Waste processes were subsequently identified, and a root cause analysis was conducted to address these inefficiencies.

SN	Description of Waste	Type
1	Toggle with many systems: SLM, Epic, SAP, IRMS	Extra Processing
2	System Downtime Maintenance	Waiting
3	Delay in Registering Referrals made beyond cut-off time & weekends	Waiting
4	Systems not integrated - need to copy over information from Epic/IRMS to SLM	Extra Processing
5	Data entry error	Defect
6	Staff Manpower down	Overburden
7	Waiting Time to Raise Queries - wait for answers, rpt labs, OTPT reports	Waiting
8	Wait Time for Medical issues to be resolved	Waiting
9	Extra processing for queries back and forth	Extra processing
10	Additional steps for Admin to key the medical & social queries	Motion
11	Extra consultation with necessary personnel (medical, nursing, rehab) for special cases	Motion
12	Waiting time as no available bed : cohort/cohort/palliative/special class	Waiting
13	Difficulty booking ambulances - hence cancel or delay	Waiting
14	NOK requests preferred date and timing for transfers	Waiting
15	Referring Team/SLH delays transfer for new med issues that crop up, labs that needs to be repeated or needs further observation	Extra Processing
16	Unable to contact NOK for social screening	Waiting
17	Different styles of processing: - Within medical - Within social	Variation

Fig. 3: Gemba Walk Table

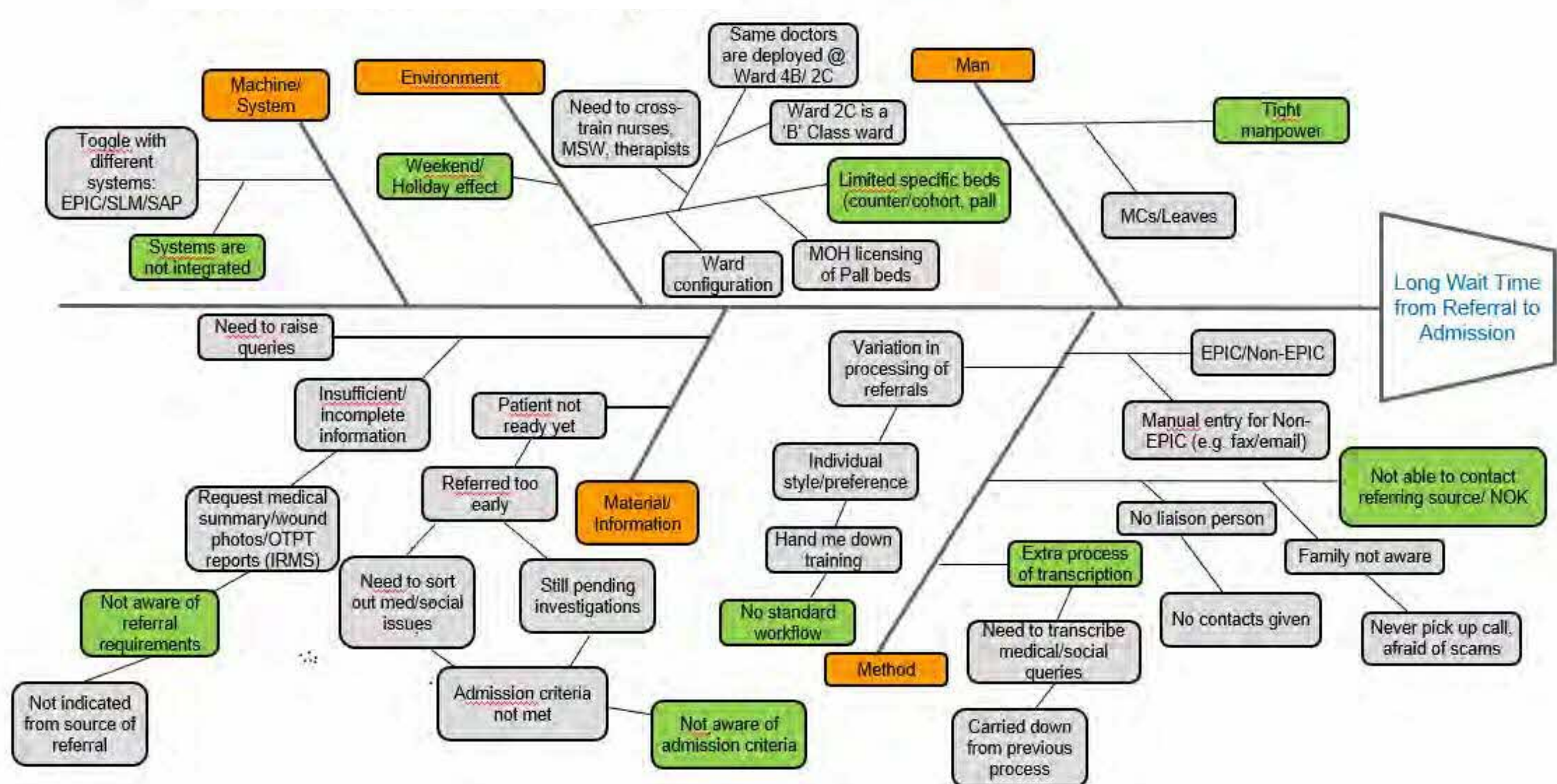


Fig. 4: Root Cause Analysis

Strategy for Change/Intervention

Countermeasures (CM):

Streamlining Referral Processes

- **Day 0 Rule:** Process at least 80% of referred cases (medical and social) on the same day they are initiated.
- **3 Day Closing:** Complete processing and acceptance of cases within three days of referral.
- Eliminated extra steps by enabling direct posting of queries in Epic by medical and social screeners.

Referral Checklist for Efficiency

- Provided a referral checklist to NUH to pre-screen cases and identify patients not ready for stepdown care.
- Significantly reduced processing time and unnecessary medical queries.

Improving Admission Processes

- Introduced a standard Inpatient Hospice Palliative Care Service (IHPCS) checklist across the NHG cluster (NUH, NTFGH, and AH).
- Streamlined identification of palliative cases suitable for inpatient hospice.
- Collaborated with palliative care, medical social workers, and nursing teams to increase daily admissions from 2 to 4.
- Identified ward extension options to manage longer waitlists.

Enhancing Communication

- Created a shared telephone directory of referring institutions, regularly updated by team members.
- Shared the IHPCS checklist across institutions (NTFGH, AH, and SGH) to establish clearer communication channels.
- Identified key contacts for SLH Referral to liaise with effectively.

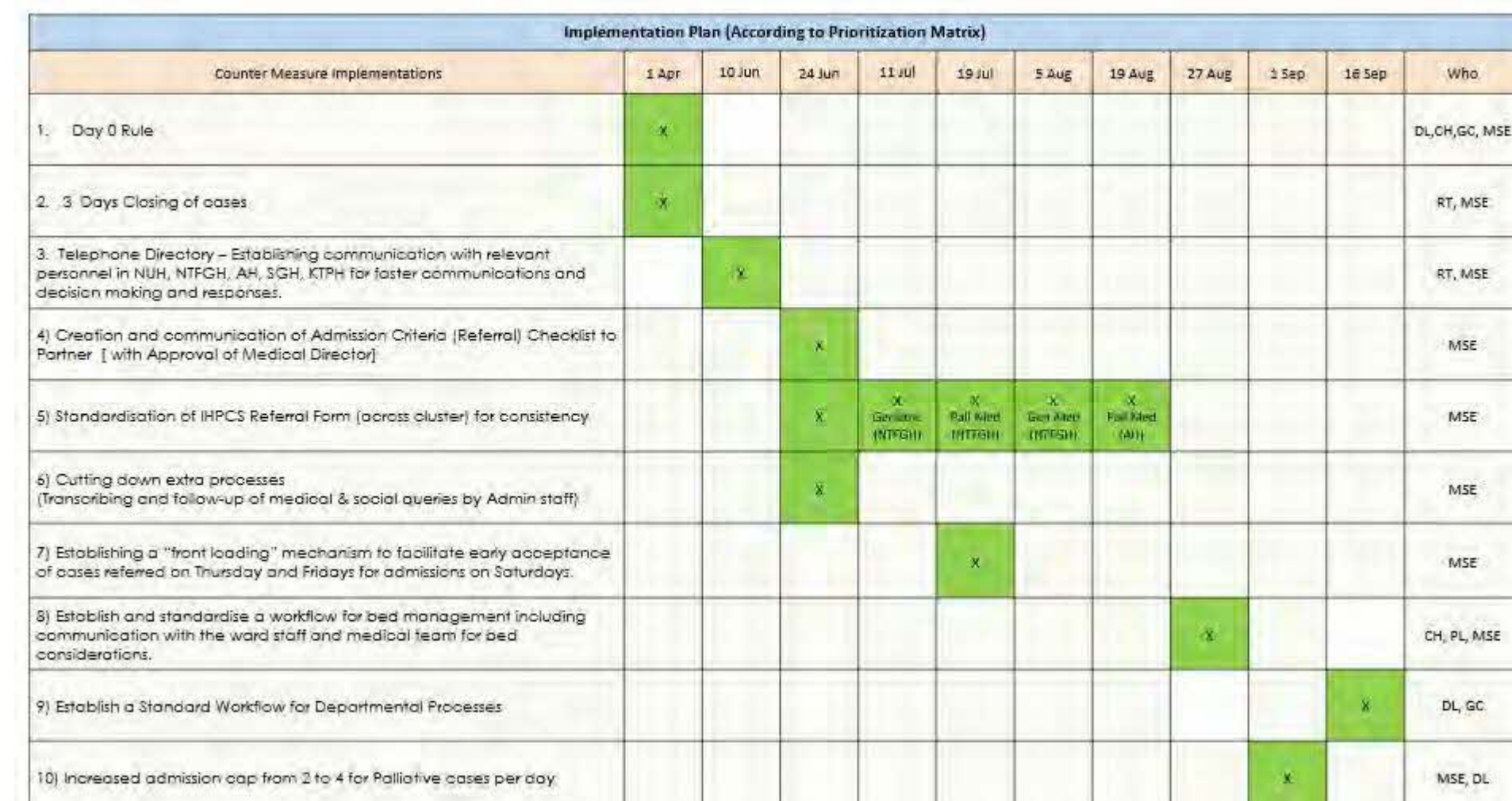


Fig. 6: Implementation Plan

Fig. 7: Referral Checklist

Fig. 8: IHPCS Checklist

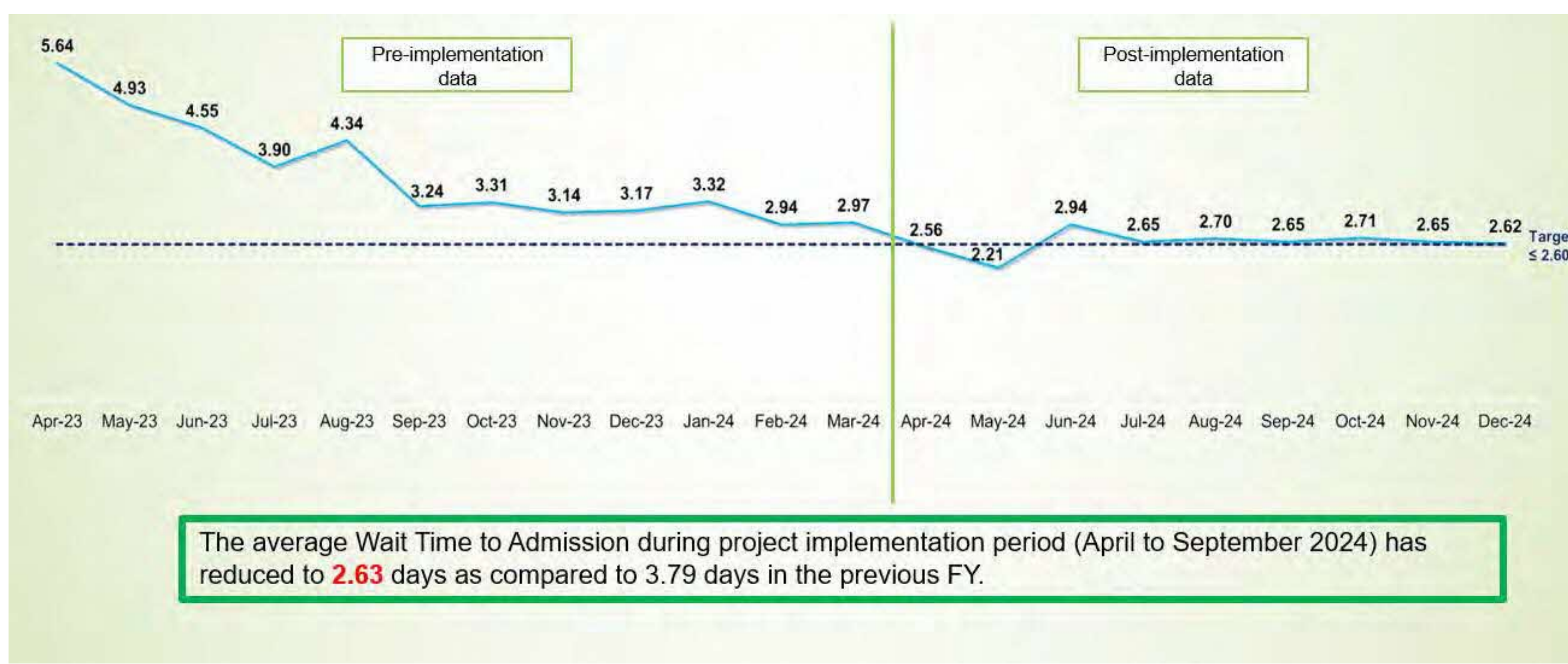
Outcomes

Baseline Data and Post-Implementation Change

The baseline data before intervention was 3.79 days. Post-implementation of countermeasures, the average has reduced to 2.63 days as at end December 2024.

Productivity Gain/Cost-Effectiveness

The reduction in wait time translates to a **29% improvement** in operational efficiency, enhancing patient flow and optimizing bed utilization. By streamlining workflows and cutting redundant processes, administrative workload was reduced, enabling better allocation of resources.



The average Wait Time to Admission during project implementation period (April to September 2024) has reduced to **2.63** days as compared to 3.79 days in the previous FY.

Fig. 9: Average Wait Time to Admission

Strategy for Change/Intervention

A multi-disciplinary collaboration of referral teams, administrative staff, clinicians, and ward nurses were established. Countermeasures were identified and prioritised to address the key challenges effectively. The focus of which are the improvement of work processes.

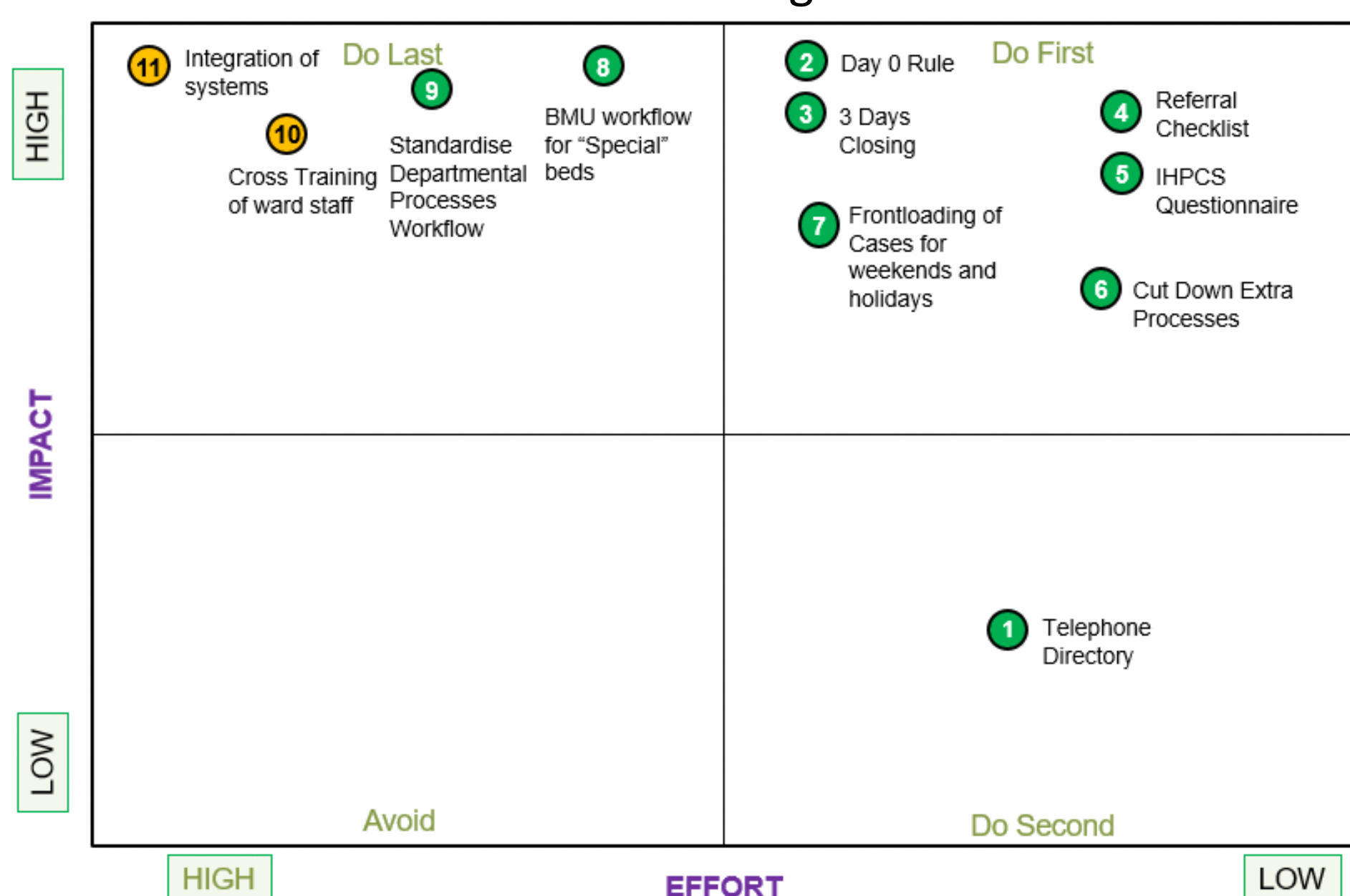


Fig. 5: Prioritisation Matrix

Sustainability and Next Steps

The project reduced WTA through LEAN methodology, streamlining workflows across EPIC institutions (NUH, AH, NTF, TTSH, KTPH, WH) with intended **future adoption to non-EPIC institutions** (SGH, CGH, KKWCH). Senior management reviews ensure sustainability, while key next steps include: **Ongoing Training:** Regularly upskilling referral teams for efficient processing. **Enhanced Communication:** Sharing standardized criteria and IHPCS forms with non-EPIC referring institutions. **Bed Management:** Optimizing processes for "special beds" like palliative and cohort beds. These measures sustain improvements and support broader implementation.

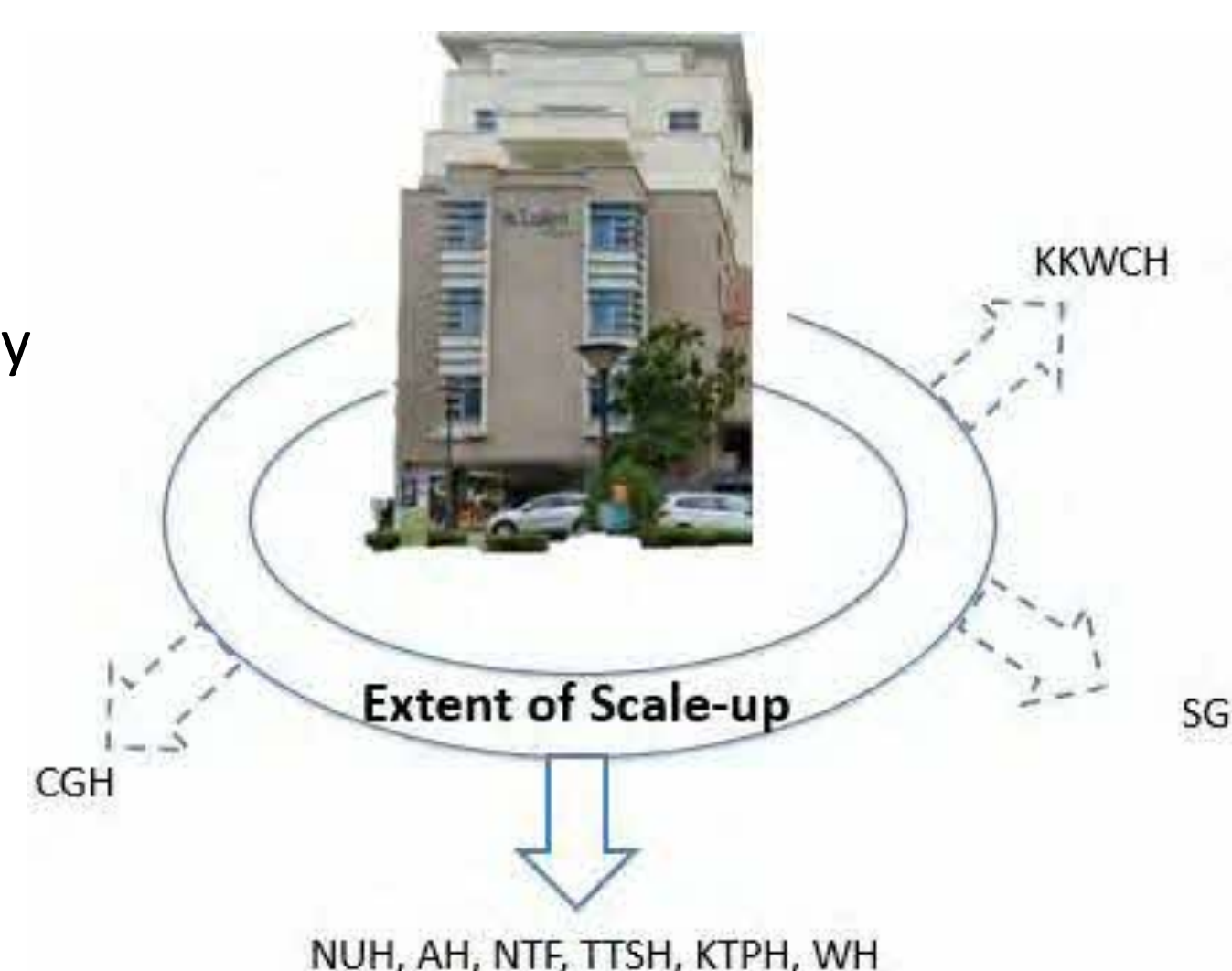


Fig. 10: Broadening of Adoption Plan