STREAMLINING WORKFLOW FOR INPATIENT SCHEDULING IN VASCULAR LABORATORY

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Define Problem, Set Aim

Problem Statement

In the last one year, the average number of calls required to schedule inpatient appointments had increased from 10 calls to 24 calls per 10 inpatients a week. Contributing factors included phone lines being out of service or unattended. The vascular technologists were spending excess time on the phone in their efforts to reach the ward. This inefficiency has caused disruption to the workflow and operations of the lab.

Aim Statement

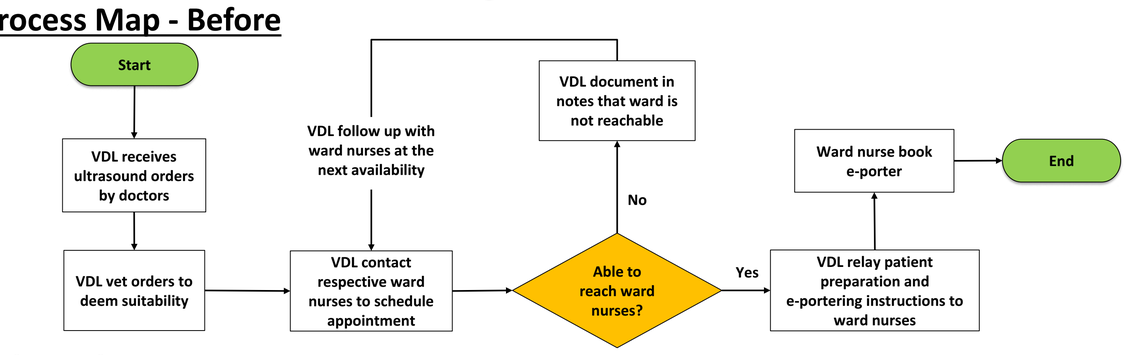
To reduce the average number of calls required for scheduling inpatients of Ng Teng Fong Hospital's Vascular Diagnostic Laboratory (VDL) from 24 calls to 2 calls per 10 inpatients a week between March 2025 and December 2025.

Establish Measures

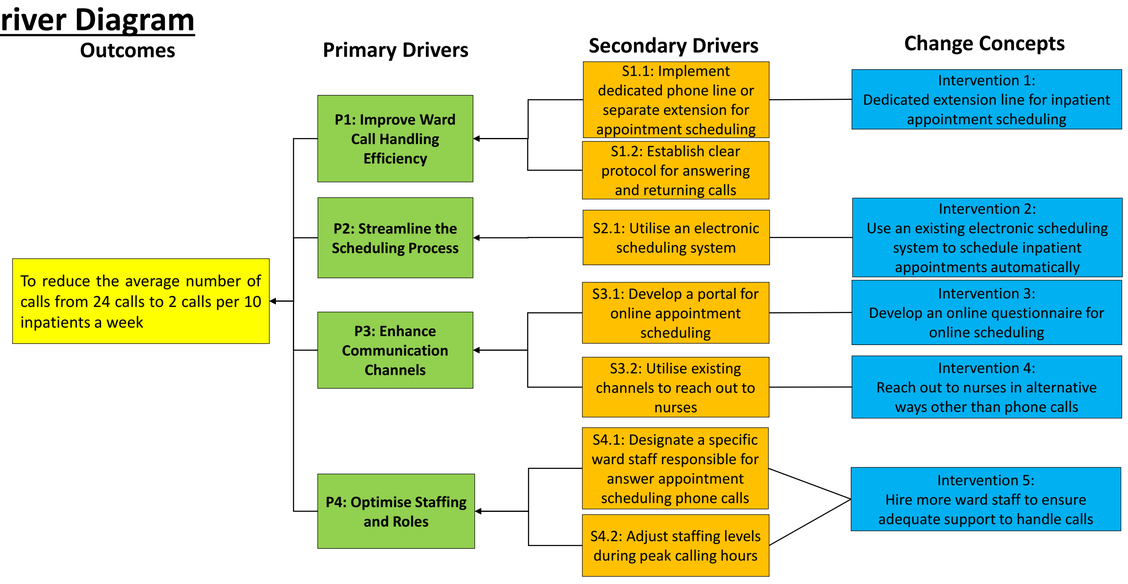
Outcome measures	:	Average number of calls required per 10 inpatients per week Percentage (%) of inpatients scheduled via charting per week
Process measure	:	Percentage (%) of inpatients scheduled via charting per week
Balancing measures	:	Number of no-show inpatients per week Number of non-compliant inpatients per week

Analyse Problem

Process Map - Before

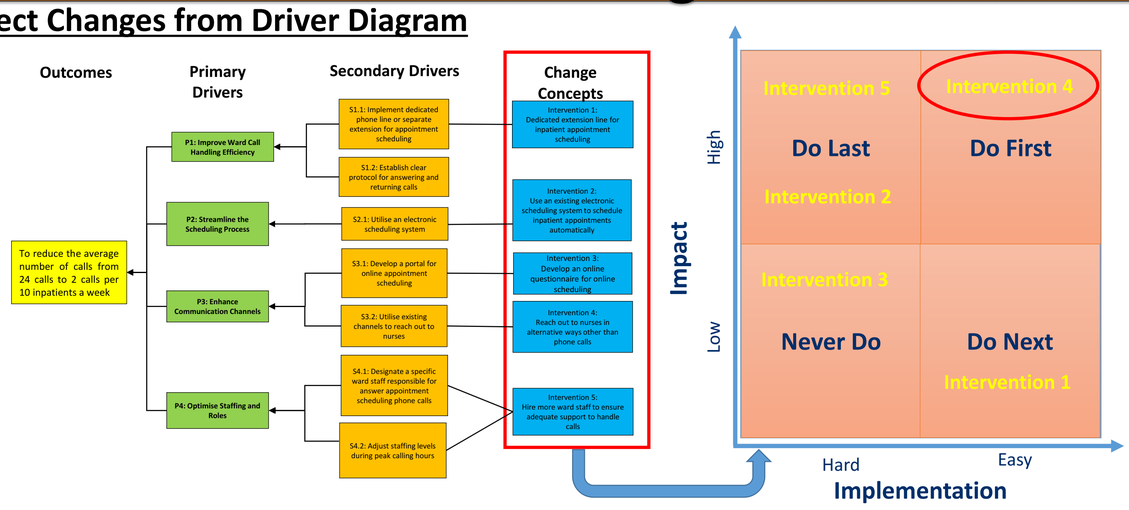


Driver Diagram



Select Changes

Select Changes from Driver Diagram



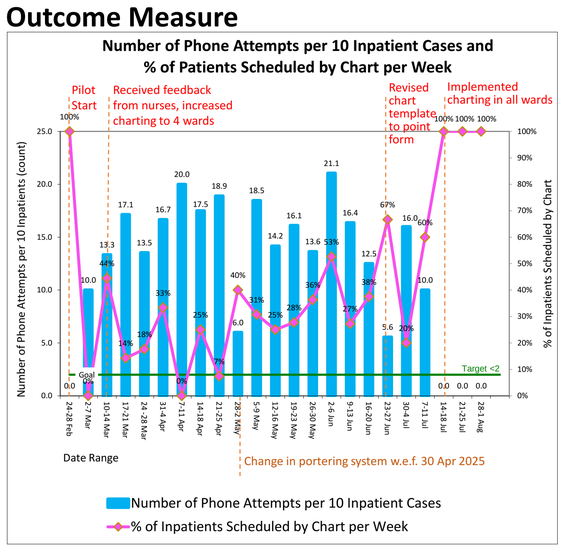
Test & Implement Changes

Cycle	Plan: "What will happen if we try something different?"	Do: "Let's try it."	Study: "What happened"	Act: "What's next?"
1.1	24 Feb 2025 Commence pilot testing in 2 wards, scheduling instructions given via chart notes. • Limited to appointments ≥ 3 hours in advance.	Instructions for nurses given via chart. • Workflow disseminated to nurses. • Continue to schedule urgent scans via phone calls. • Data collected for non-compliance and punctuality of patients.	Insufficient data collected for analysis due to: • Low number of referrals • Vascular technologists (VTs) forgetting to use new workflow and to collect calling data.	• Increase the number of wards for pilot testing. • VTs reminded to use new pilot workflow for the pilot wards, and to document all calls.
1.2	10 Mar 2025 • Extend pilot testing to 4 wards. Nurses feedback to be collected. • VTs reminded to schedule appointments using chart notes for piloting wards.	Planned actions were implemented and data collected for analysis.	Increased in inpatients scheduled via charting. • Nurses feedback: To simplify chart notes template for easier reading. • Non-compliance (16%) were mainly issues with portering.	• Adapt and simplify chart notes for nurses to read. • Mode of transport defaulted to trolley to mitigate part of portering issue.
1.3	27 Jun 2025 Review and simplify chart notes in point form for fast and easy comprehension.	A simplified chart notes template implemented.	Number of inpatients scheduled via charting continue to increase. • Positive feedback from nurses on simplified chart notes. • Overall increase in staff satisfaction (VTs and nurses)	Plan adopted with revisions: • New workflow in all wards w.e.f. 14 Jul 2025. Staff satisfaction survey 1 month later. • No minimum time requirement for advanced scheduling. New workflow to be disseminated to all wards.

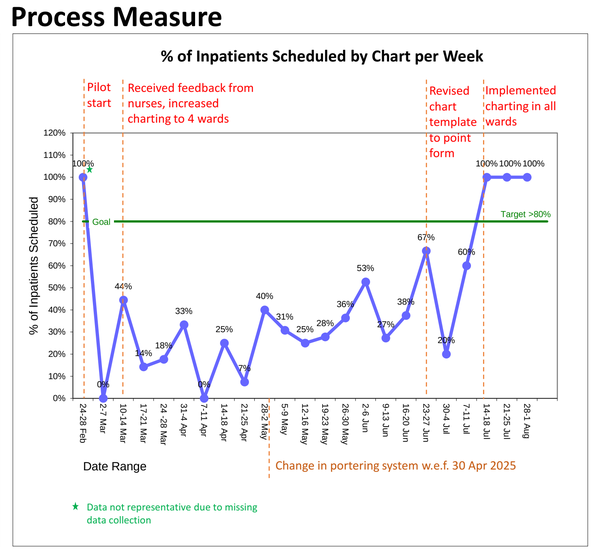
Test & Implement Changes

Results Observed

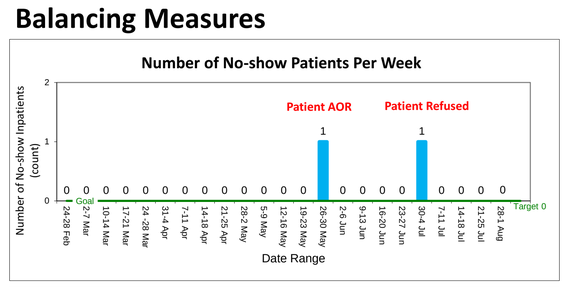
Outcome Measure

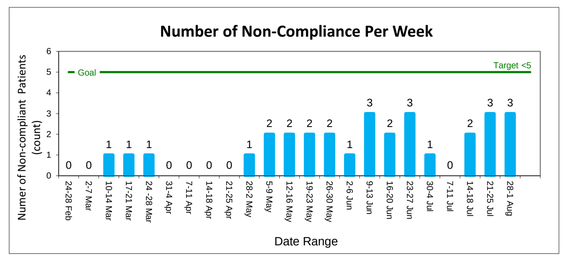


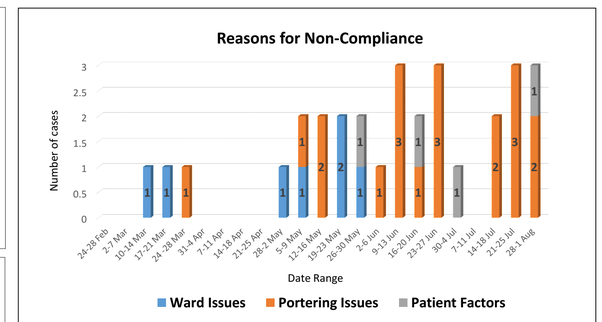
Process Measure



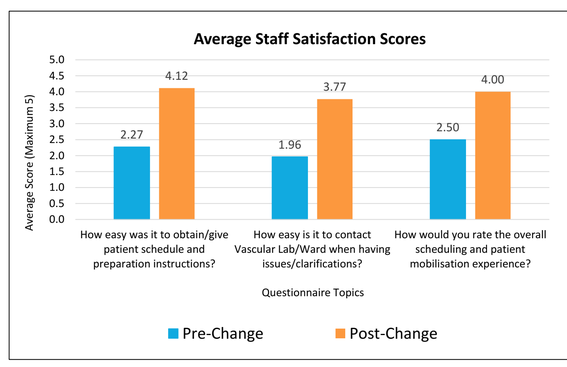
Balancing Measures





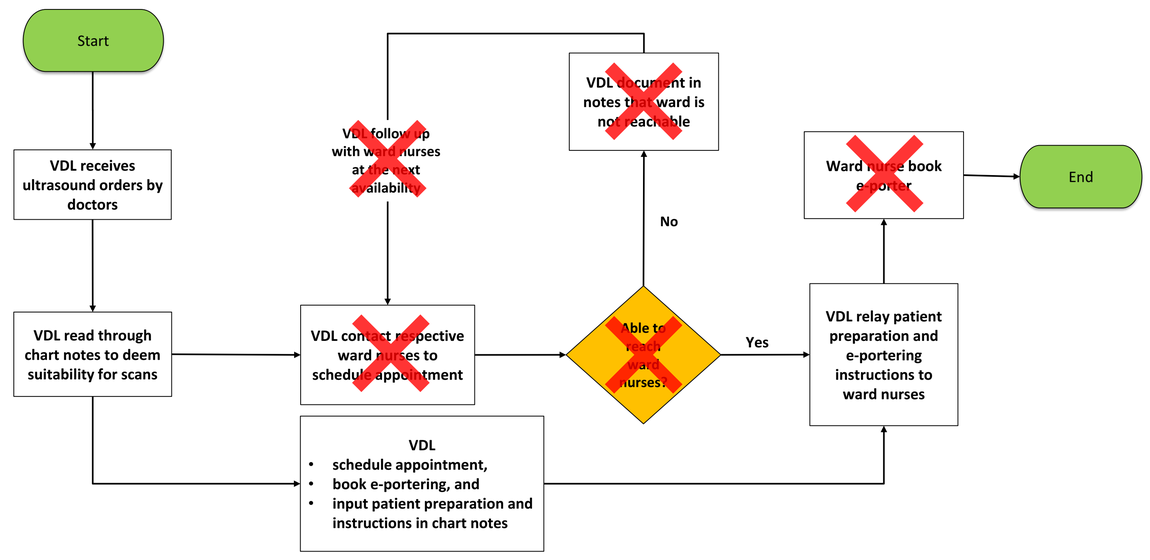


- Majority of non-compliance (19 cases) were attributed patients being late due to portering issues. However, the scan was still able to proceed. The impact of non-compliance is low.
- 7 cases were due to ward issues (changing mode of transport).
- 4 cases were due to patient's factor:
  1 AOR, 1 refused, 1 not ready, 1 patient's condition unsuitable for scan



- A questionnaire was given to the vascular technologists as well as the ward nurses to assess the impact of workflow changes.
- The higher average scores for the "Post-change" questions reflect a more favourable perception of the new workflow, implying a shift towards a more positive experience.
- Staff comments:
  "Vascular techs do not have to be on the phone for long and wait for ward nurses to pick up just to schedule 1 patient"
  "The written instruction is way better than verbal as record of communication"
  "Reduced calling needed; clear instructions for appointment"
  "Portering to be more predictable / timely"
  "Continue with this new initiative please"

Process Map - After



Spread Changes, Learning Points

What are/were the strategies to spread change after implementation?

The collaboration with nurses was vital in spreading the change, as well as gathering feedback which was essential for identifying issues and making necessary adjustments for a successful implementation of the project.

What are the key learnings from this project?

The limitation in this project is acknowledged as the baseline data was not collected hence may not be representative. The key learnings from this project include the importance of reviewing the initial stages of data collection to ensure relevance and quality of the data collected. A future project should strive to establish a more accurate baseline before initiating interventions.

Ng Teng Fong General Hospital

Jurong Community Hospital