



Preliminary findings of implementation feasibility of the ICHOM Stroke Standard set in an acute tertiary institution in Singapore

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Introduction

- Ischaemic stroke incurs substantial morbidity and treatment costs
- The Singapore General Hospital has 5 years of experience with value based care for ischaemic stroke but this is limited to outcomes at discharge and with no input from patients
- We have adopted the ICHOM Stroke Standard set which includes the use of Patient-Reported Outcome Measures (PROMs), extension of focus beyond acute care and potential for benchmarking
- Implementation of this framework, however, presents challenges due to the complexity of multiple outcome measures and data collection time points.

Aim

- To evaluate the feasibility of implementing the ICHOM Stroke Standard Set in SGH.
- To determine and map the processes required on top of existing systems for ICHOM stroke set adoption

Methods

- Feasibility assessment was conducted in Feb 2024, evaluating data readiness and process requirements.
- Variables within the ICHOM Stroke Set were stratified into 3 categories (Table 1) based on resource requirements.
- A phased approach for data collection implementation was designed to assess the practicality of processes and identify potential barriers to full-scale implementation.
- Phase 1 is scheduled to commence in Aug 2024.

Table 1: Categories of variables

Category	Considerations	Evaluation plan
Administrative	<ul style="list-style-type: none"> • Overlaps with existing Value Driven Care (VDC) initiative 	<ul style="list-style-type: none"> • Compare ICHOM and VDC data fields and definitions
Clinical	<ul style="list-style-type: none"> • Availability in institution's electronic Health Intelligence Systems (eHIntS) • Format (structured vs unstructured) and completeness of data 	<ul style="list-style-type: none"> • Exploration on eHIntS to identify unavailable fields
Patient reported	<ul style="list-style-type: none"> • Location of patients at the various time points • Presence of existing PROMs • Incorporation of PROMs collection to current work processes 	<ul style="list-style-type: none"> • Stroke patient journey mapping • Engagement and ground immersions with respective groups to understand current practices and elucidate potential obstacles

Conclusion

- Our feasibility assessment of implementing the ICHOM Stroke Standard Set in SGH revealed both opportunities and challenges.
- Patient journey mapping facilitated efficient stakeholder engagement, a key learning for future initiatives.
- This evaluation provided a foundation for integrating patient-reported outcomes into our value-based care framework.

Results

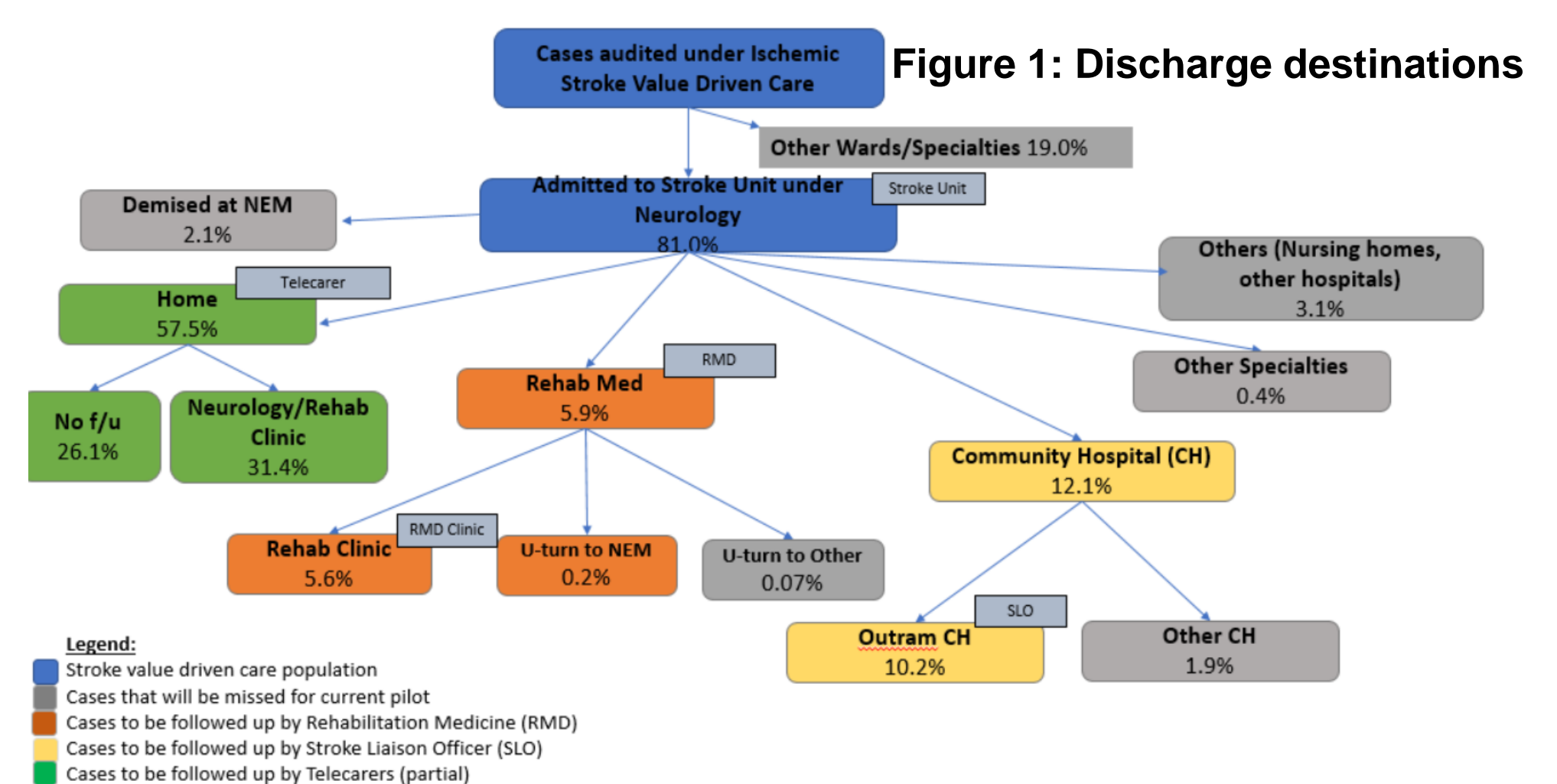
- 19 (79.2%) of the 24 measures to be collected were retrievable from eHIntS
- Some would be incomplete or require case review
- Remaining variables required modification of current processes and system for information capture (Table 2).

Table 2: Data Readiness

Category	ICHOM Data	VDC Data	Extractable from eHIntS
Admin Data	Age	Y	Y
	Sex	Y	Y
	Ethnicity	N	Y
	LOS	Y	Y
	Rehab	Y	Y
	Discharge Location	Y	Y
Clinical Data	Survival	Y*	Y
	Stroke Type	Y	Y
	Severity	Y*	Y
	Past Medical History and Co-morbidity	Y	Y
	Diagnostic evidence base	Y	Y
	Thrombolytic	Y	Y
Patient Reported Data	Thrombectomy	Y	Y
	Intracranial hemorrhage post thrombolytic/thrombectomy	N	Y
	Simplified modified Rankin Scale Questionnaire (smRSq)	N	N
	Smoking cessation	N	N
Patient Reported Data	Self-reported new stroke	N	N
	Functional Status	N	N
	PROMS (PROMIS-10)	N	N
	Duration of symptoms	N	Y
	Smoking History	N	Y
	Alcohol use	N	Y
	Living Location	N	Y*
	Living alone	N	Y*

* Requires alignment of definition/ more comprehensive data

- After admission, patients had diverse discharge trajectories
- At least six distinct destination categories identified (Figure 1)
- This was a substantial challenge in obtaining day 90 PROMs



- Thus, we developed a multi-faceted approach to ensure comprehensive and timely data collection
- Stakeholder engagement and ground immersions were conducted
 - Identified overlaps between existing questionnaires and PROMs of the ICHOM Set
 - Noted varying follow-up time points for reviews
- Proposed interventions include integration of questionnaires to reduce redundancy, and reconciling follow-up time points..