Project Title

Improving Post Stroke Depression Screening Rate using Hospital Anxiety Depression Scale (HADS)

Project Lead and Members

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Project members: Dr Elaine Jumalon, Dr Li Hanzhi, Dr Yong Kuan Yew, Dr Domineck Ramos, Dr Chua Chi Siong, Dr Kelvin Koh, Ms Jasmine Chua, Ms Sofiah Binte Saharudin

Organisation(s) Involved

Jurong Community Hospital

Healthcare Family Group(s) Involved in this Project

Medical

Applicable Specialty or Discipline

Neurology

Aims

JCH C10 Stroke Rehabilitation Unit to achieve post stroke depression screening rate using HADS within 2 working days from <10% to 80%, for all newly admitted stroke admissions to C10, by mid October 2021. This is to allow better detection and early treatment of post stroke depression.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

a) Multi-modality approaches using smartphase clerking template, structured regular ward based orientation program, visual reminders on computers were effective in improving the post stroke depression screening rate with sustainable results.
b) There will be a need to review future strategies if post stroke depression screening is to be rolled out to the rest of JCH wards to ensure sustainability and ease of administration.
c) There will also be a need to review translation of HADS into other languages to aid in its administration.

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Safe Care, Adherence Rate

Keywords

Post Stroke Depression Screening, Hospital Anxiety Depression Scale

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IMPROVING POST STROKE DEPRESSION SCREENING RATE USING HOSPITAL ANXIETY DEPRESSION SCALE (HADS)

MEMBERS: DR ELVINA TAY, DR ALVIN ONG, DR ELAINE JUMALON, DR LI HANZHI, DR YONG KUAN YEW, DR DOMINECK RAMOS
SPONSORS: DR CHUA CHI SIONG, DR KELVIN KOH
FACILITATORS: MS JASMINE CHUA, MS SOFIAH BINTE SAHARUDIN

❑ SAFETY ❑ PRODUCTIVITY
✓ QUALITY ❑ COST
❑ PATIENT EXPERIENCE

Define Problem, Set Aim

Problem/Opportunity for Improvement
Screening for post stroke depression using a validated tool was conducted in fewer than 10% of stroke patients who were admitted to C10, JCH stroke rehabilitation unit, between October-November 2020.

Canadian Best Practice Recommendations 2015 stated that all patients with stroke should be screened for depressive symptoms, given the high prevalence of depression post-stroke and the stroke evidence for treating symptomatic depression post stroke. The early identification and treatment of post stroke depression is crucial as post stroke depression can affect functional outcomes.

Aim
JCH C10 Stroke Rehabilitation Unit to achieve post-stroke depression screening rate using HADS within 2 working days from <10% to 80%, for all newly admitted stroke admissions to C10, by mid October 2021. This is to allow better detection and early treatment of post-stroke depression.

Project Scope
JCH doctors to screen all new stroke patients who are admitted to JCH C10 Stroke Rehabilitation Unit for post-stroke depression, using the Hospital Anxiety and Depression Scale, within 2 working days.

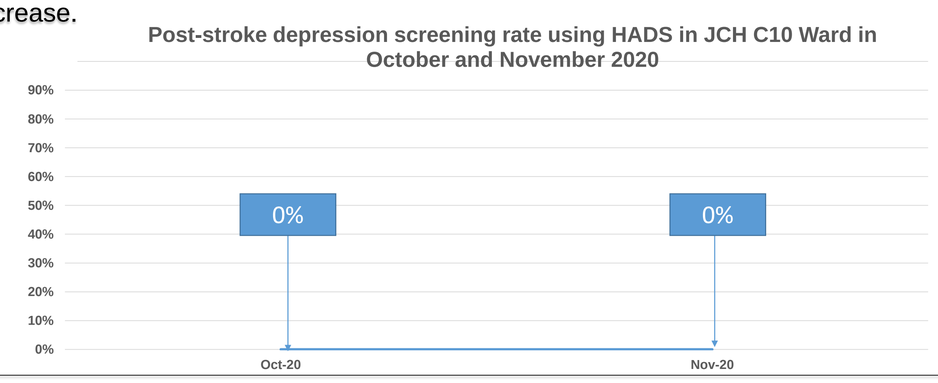
Inclusion Criteria	Exclusion Criteria
• All new stroke patients admitted to JCH C10 Stroke Rehabilitation unit	• Old stroke history (diagnosed > 6 months ago) • Re-admitted cases to C10 with HADS screened prior • Medical instability within 2 working days of admission • Severe aphasia and speech difficulties • Significant psychiatric history of depression, • Inability to follow 1 step commands and patients in disorders of consciousness (i.e. coma, vegetative state and minimally conscious state).

Establish Measures

What was your performance before interventions?
Outcome Measure: Average post stroke depression screening rate amongst stroke patients during their inpatient stay.

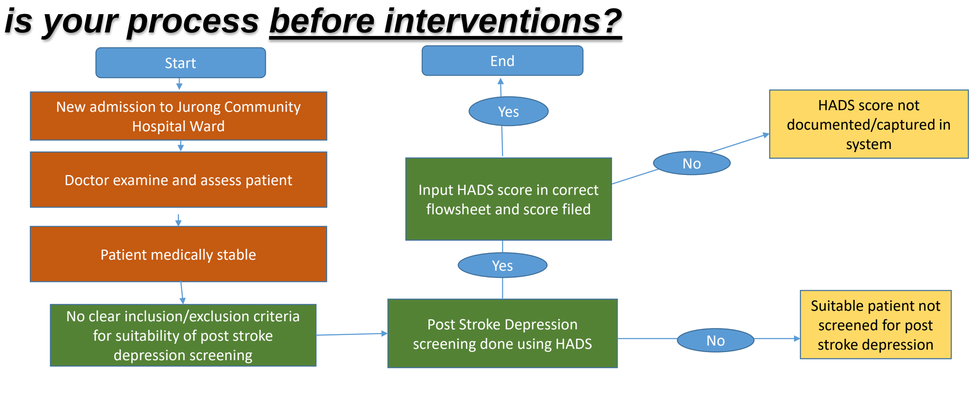
Process Measure: The percentage of all newly admitted stroke patients to C10, whom meet exclusion and inclusion criteria, with HADS score calculated within 2 working days and documented correctly in inpatient flowsheet.

Balancing Measure: For increasing the percentage of newly admitted stroke patients to C10 with HADS score administered, staff satisfaction does not decrease and time required for admission clerking does not significantly increase.

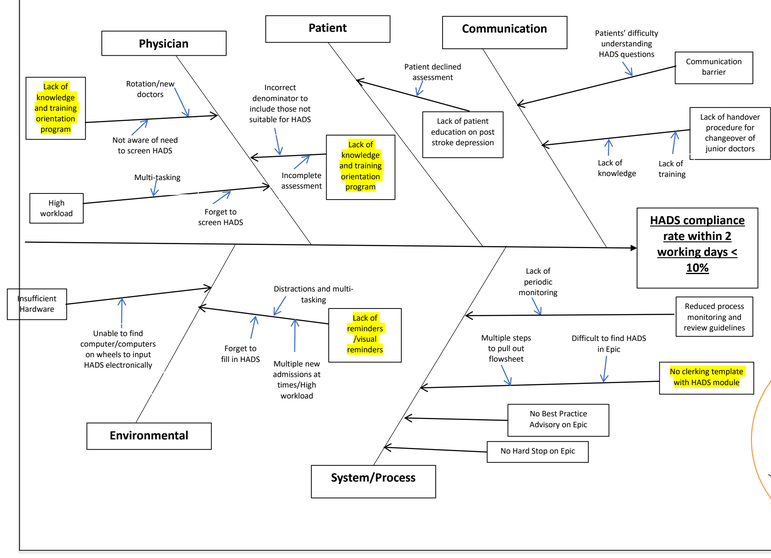


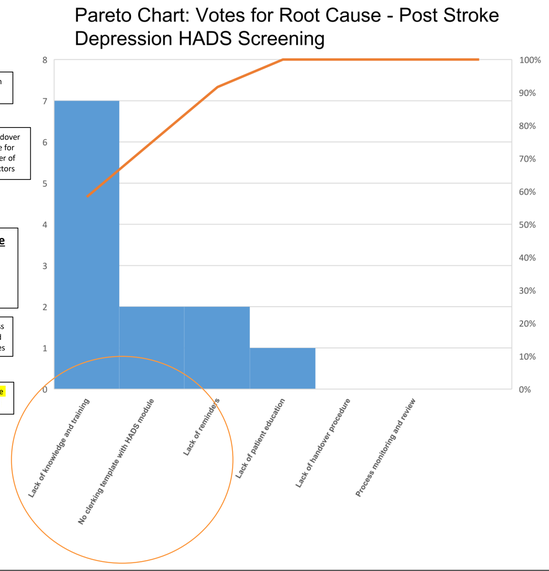
Analyse Problem

What is your process before interventions?



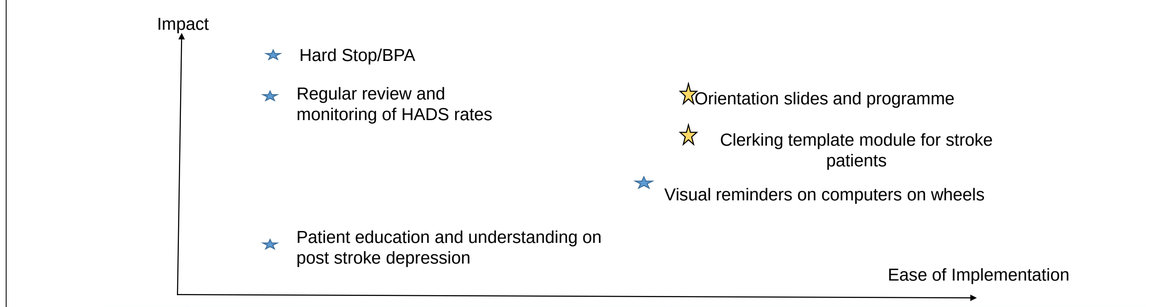
What are the probable root causes?





Select Changes

What are all the probable solutions? Which ones are selected for testing?



	Hard implementation	Easy Implementation
High Impact	Do Last • Hard stop/BPA epic (D) • Regular review of HADS screening rates in Neurostroke rehabilitation unit (E)	Do First • Orientation slides and programme (A) • Clerking template module for stroke patients (B)
Low Impact	Never Do • Patient education and patient understanding on post stroke depression (F)	Do Next • Visual reminders on computers on wheels (C)

PDSA Cycle 1 Implementation:
- Orientation slides and programme
- Clerking template module for stroke patients with HADS

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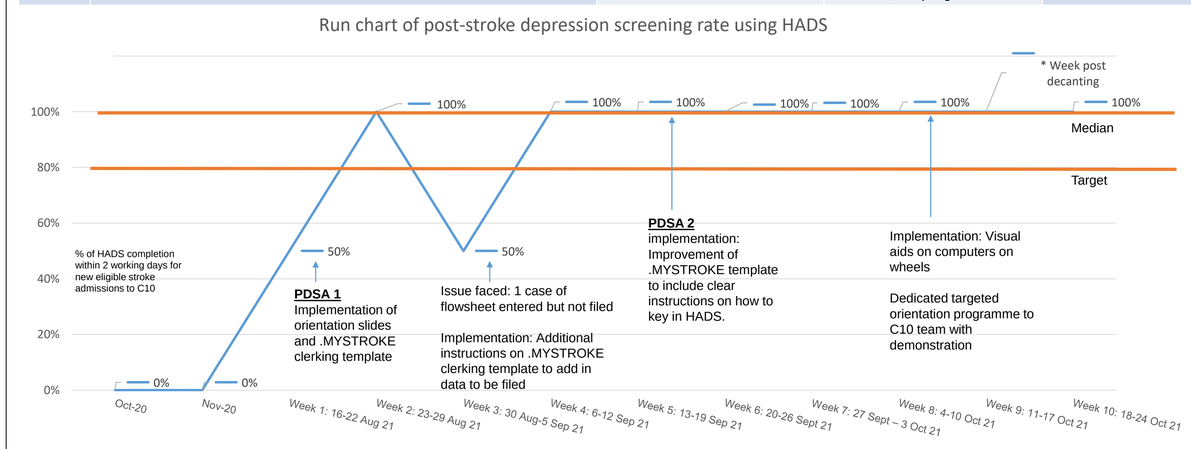
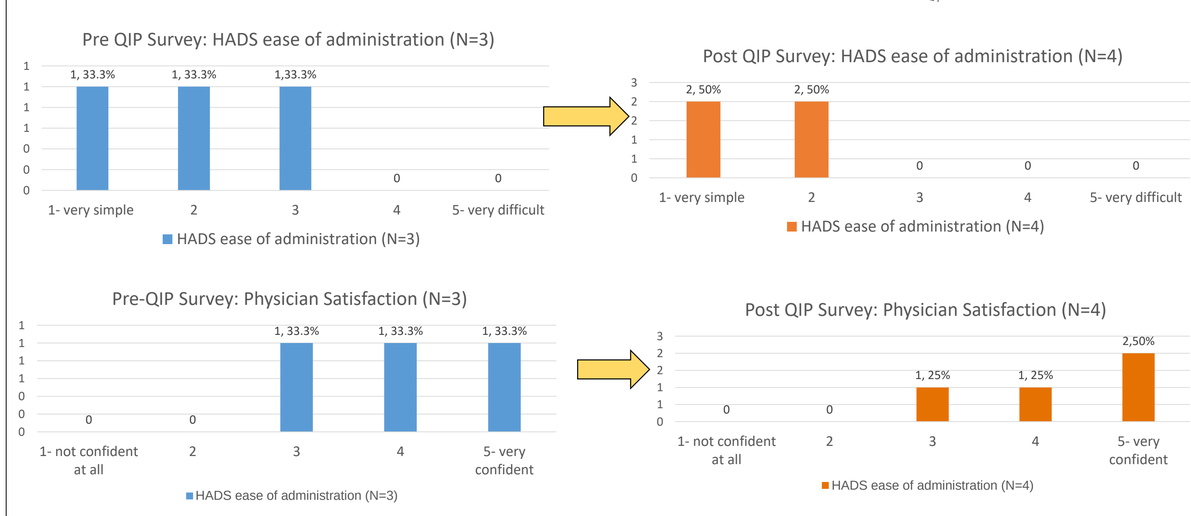
PDSA Cycle 2 Implementation:
- To add visual aids on computers on wheels
- Dedicated targeted orientation programme to C10 team with demonstration

Test & Implement Changes

How do we pilot the changes? What are the initial results?

CYCLE	PLAN	DO	STUDY	ACT
1	**Aim of Cycle** • Indicator of success: at least 80% of HADS completion within 2 working days for new eligible stroke admissions to C10 • What are your predictions: Improvement in percentage of HADS completion within 2 working days for new eligible stroke admissions to C10. **Who:** **Inclusion criteria**: all new stroke patients to C10 Neurostroke ward **Exclusion criteria:** old stroke history (diagnosed > 6 months ago), re-admitted cases to C10 with HADS screened prior, medical instability within 2 working days of admission, severe aphasia and speech difficulties, significant psychiatric history of depression, inability to follow 1 step commands and patients in disorders of consciousness (i.e. coma, vegetative state and minimally conscious state **What:** HADS data collected via flowsheet and HADS clerking template: .MYSTROKE **Where:** JCH C10 Neurostroke ward **When:** All new stroke patients to C10 Neurostroke ward (who fulfil inclusion/exclusion criteria) within 2 working days PDSA 1 period: 16th August-12th September 2021 (1st 28-day cycle)	**Testing and implementing changes at beginning of PDSA 1:** • Orientation slides and programme • Clerking template module for stroke patients with HADS **Problems and unexpected results** • Week 1 (16-22 Aug): wrong flowsheet filed • Week 3 (30 Aug-5 Sept): flowsheet entered but not filed	**Results:** see run chart below Data showed improvement of HADS completion within 2 working days for new eligible stroke admissions. **Learning points from this cycle** • There is a need to ensure sustainable results. Main problem is flowsheet not filed or wrongly entered. • Clearer instructions needed to be given on practical aspects of keying in HADS into Epic.	**Plan** for next cycle with aim to ensure sustainable results and 6 data points above median. • To improve orientation programme to C10 team with demonstration • Improvement of .MYSTROKE template to include clearer instructions • To add visual aids on computers and computers on wheels
2	**Aim of Cycle** • Indicator of success: at least 80% of HADS completion within 2 working days for new eligible stroke admissions to C10, with sustainable results (at least 6 data points above median). **Who / What / Where:** **Similar to cycle 1** **When:** Similar to cycle 1 PDSA 2 period: 13th September to 24th October 2021 (2nd 28-day cycle- additional 2 weeks in light to ensure 6 data points above median)	**Testing and implementing changes:** • Improvement of .MYSTROKE template to include clear instructions on how to key in HADS on 14th September 2021. • Visual aids on computers and computers on wheels on 4th October 2021 • New orientation slides with demonstration to new residents in C10 team on 11th October 2021. **Problems and unexpected results** • Anomaly on admissions for week 9 (11-17th October 2021) in light of recent decanting of patients from another ward	**Results:** see run chart below Data to predictions: Data showed improvement of HADS completion within 2 working days for new eligible stroke admissions with sustainable results. **Learning points from this cycle** • Importance on type of written instructions in smart phases • Importance on live demonstration for work processes rather than written instruction for orientation program.	**Conclusion:** • Multi-modal interventions and interventions at various points of patient's clerking process were required to achieved successful and sustainable results.





Spread Changes, Learning Points

What are/were the strategies to spread change after implementation?
- Presentation to QIP sponsors and department leaders
- Future presentation to PACC department to implement changes beyond JCH Neuro-stroke ward and to include post-stroke depression screening as part of care plan for stroke patients in other JCH wards.
- Potential to incorporate stroke clerking template and post stroke depression education into regular junior doctor orientation program.
- Guidelines on post stroke depression management using neurostroke EBM workgroup as a platform

What are the key learnings from this project?
- Multi-modality approaches using smartphase clerking template, structured regular ward based orientation program, visual reminders on computers were effective in improving the post stroke depression screening rate with sustainable results.
- These approaches also did not significantly affect balancing measure of clerking time and physician satisfaction.
- There will be a need to review future strategies if post stroke depression screening is to be rolled out to the rest of JCH wards to ensure sustainability and ease of administration.
- There will also be a need to review translation of HADS into other languages to aid in its administration

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