UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY
Department of Medicine
Strategic Clinical Improvement Committee
Partnerships in Action
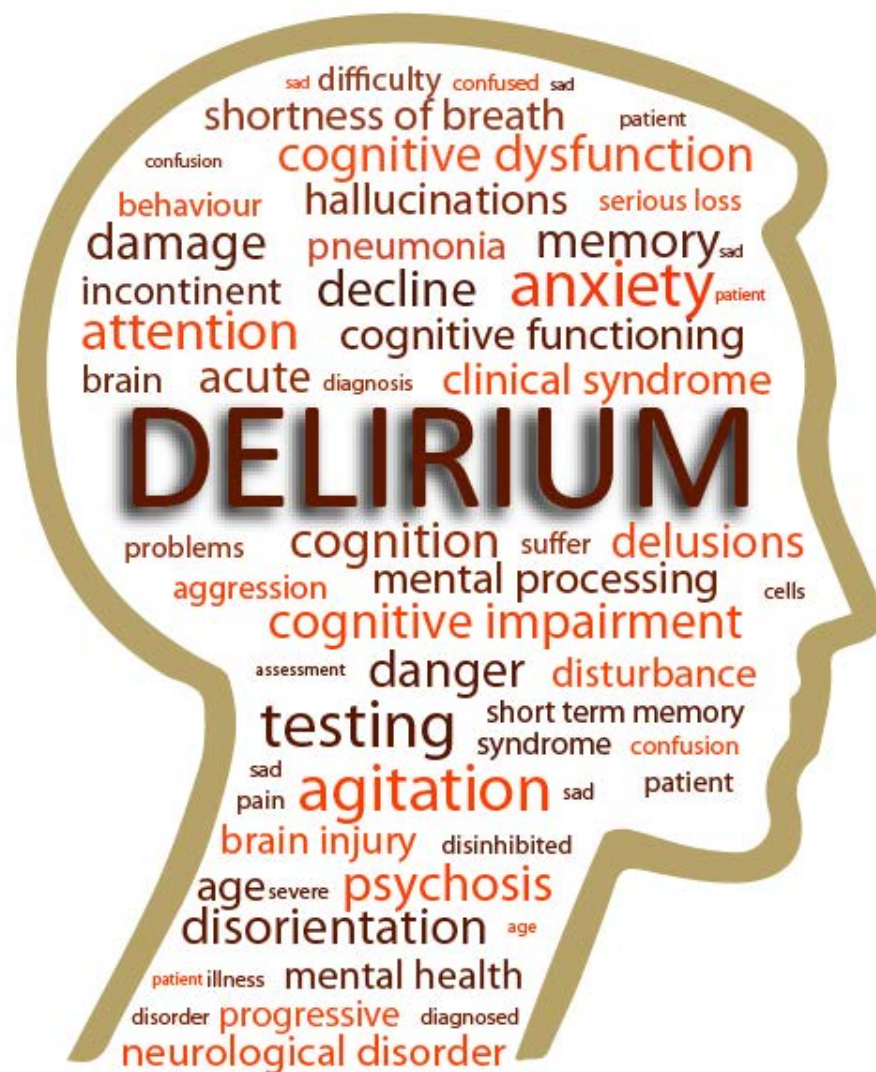
Covenant Health

Alberta Health Services

Using the 'Confusion Assessment Method (CAM) Tool to screen for delirium amongst hospitalized inpatients – a Quality Improvement Initiative.
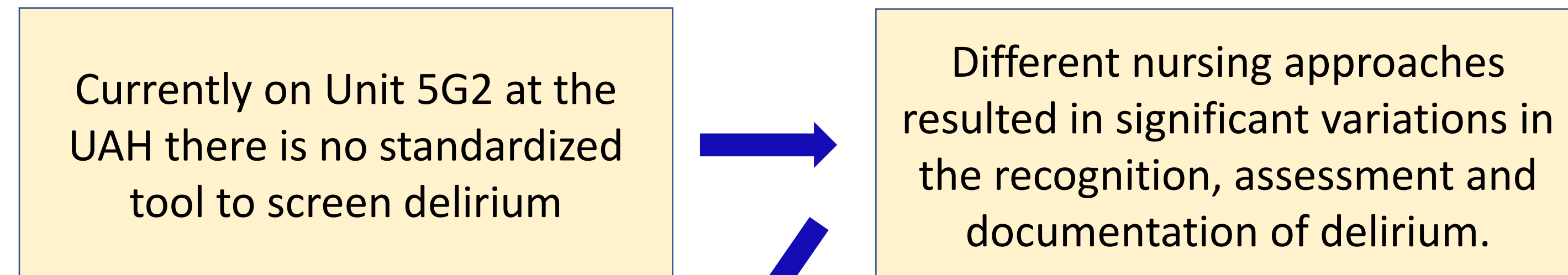
Mohammad Ashif Rahman, Frances Carr, Mina Pound, Carolyn-Ridell, Laurie Nickerson

Background

- Delirium is an acute, fluctuating confusional state that is treatable and potentially preventable when recognized early[1-3].
- The Confusion Assessment Method[4] (CAM) is a standardized, validated screening tool to assist with the identification of delirium. It shows a sensitivity of 94% and a specificity of 89%[5].
- AHS recognizes the value of the CAM tool both for screening for and in diagnosing delirium.

Problem Statement

Currently on Unit 5G2 at the UAH there is no standardized tool to screen delirium

→

Different nursing approaches resulted in significant variations in the recognition, assessment and documentation of delirium.
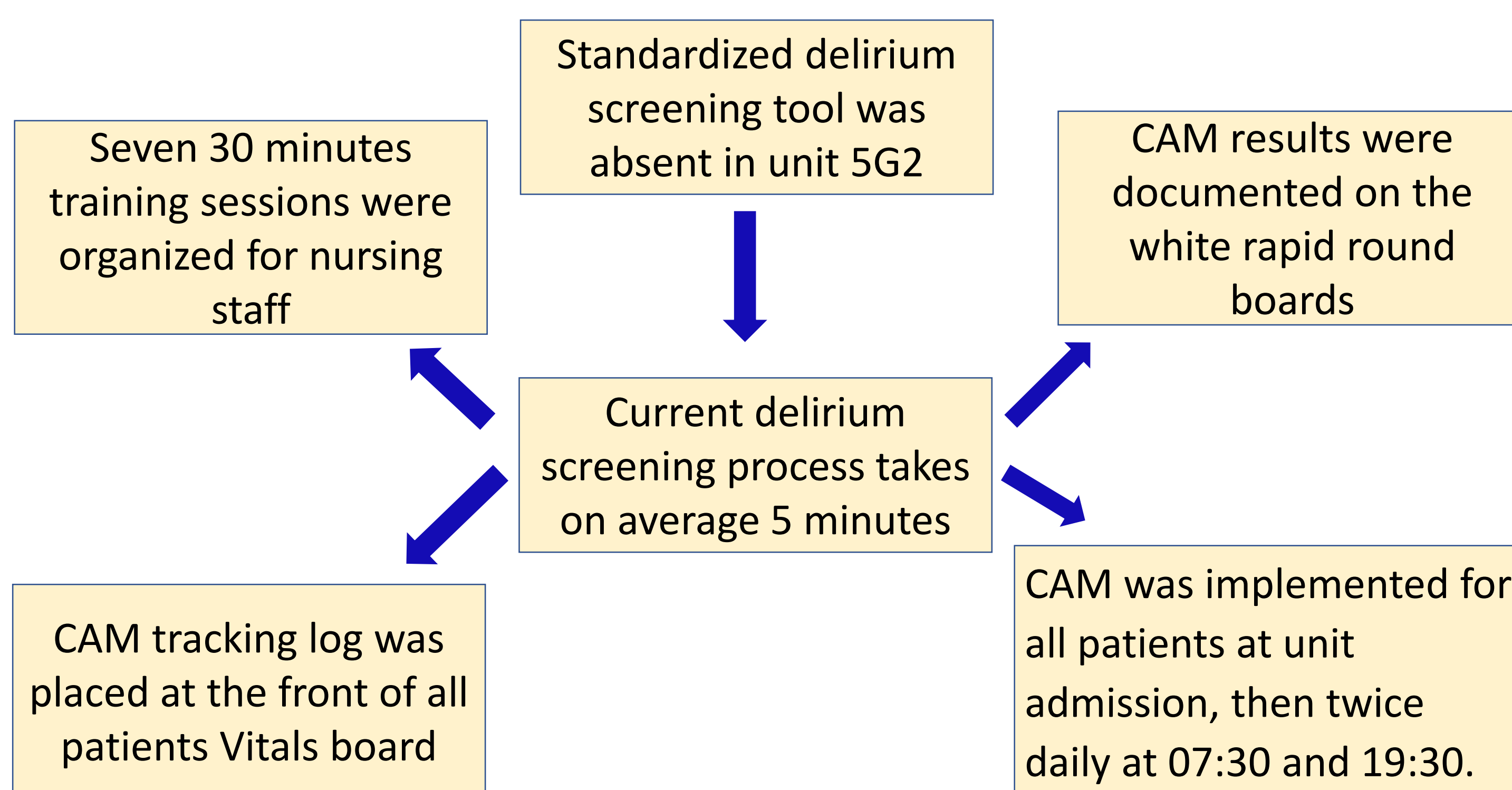
Screening for delirium by CAM can:
- Standardize these assessments
- Reduce variations in language & subjective judgement
- Reduce assessment duration

Aim

All patients (newly admitted / inpatients) on unit 5G2 at the University of Alberta will be screened for delirium by nursing staff using the CAM tool at the time of admission, then twice a day, by the end of July, 2018.

Build Understanding

Seven 30 minutes training sessions were organized for nursing staff

Standardized delirium screening tool was absent in unit 5G2

CAM results were documented on the white rapid round boards

Current delirium screening process takes on average 5 minutes

CAM tracking log was placed at the front of all patients Vitals board

CAM was implemented for all patients at unit admission, then twice daily at 07:30 and 19:30.

Manage Change

Communication / collaboration strategies

- The project team include a clinical nurse educator and unit manager alongside a geriatric physician, resident, and Quality Improvement consultant.
- Motivation and engagement from unit staff was achieved through staff education about the incorporation of delirium screening into the upcoming CIIS system (Connect care).

Process Assessment

OUTCOME MEASUREs	PROCESS MEASURES	• BALANCING MEASURES
• % patients screened for delirium with CAM tool at admission • No. of patients screened with CAM with consistent nursing documentation • No. of times CAM tool is used for screening for delirium / total number of patients with confusion • No. of CAM positive results / total number of delirium cases • No. of eligible patients not screened with CAM	• No. educational sessions • No. attendees / educational session • % unit staff attending sessions • Nursing documentation of CAM usage and results • Time required to use CAM tool (mins) • Time (mins) assessing & documenting delirium symptoms per patient-nursing with CAM	• Time required for CAM training / person (mins) • No. additional staff required for coverage during training attendance / session • Complication rate (LOS, delirium duration, falls, restraints) • Financial costs (CAM tool license, training, stationary costs)

Act To Improve

PDSA Cycle 1

- Duration: 3 months (May - July).
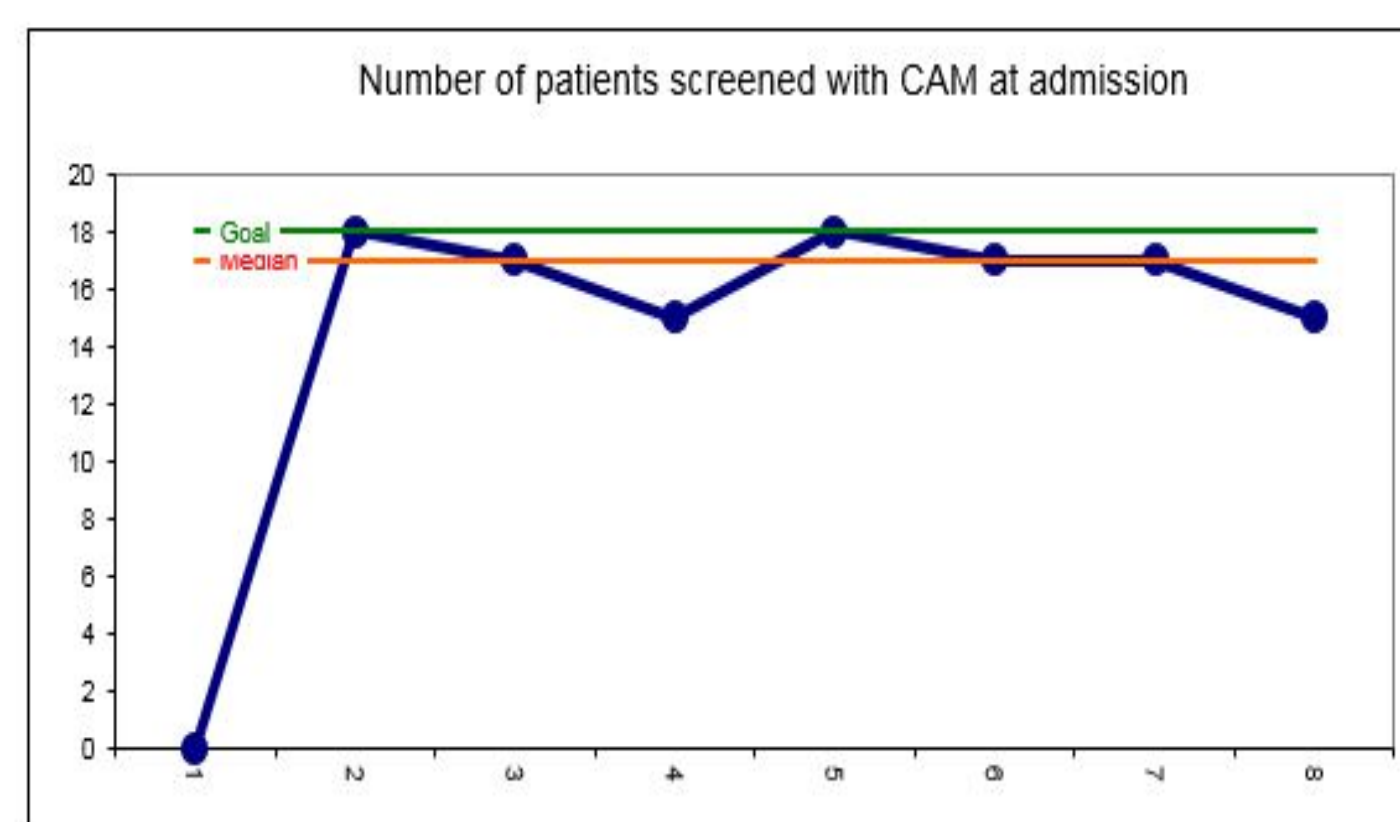- Sample size: 139.

Fig 1. CAM screening at admission
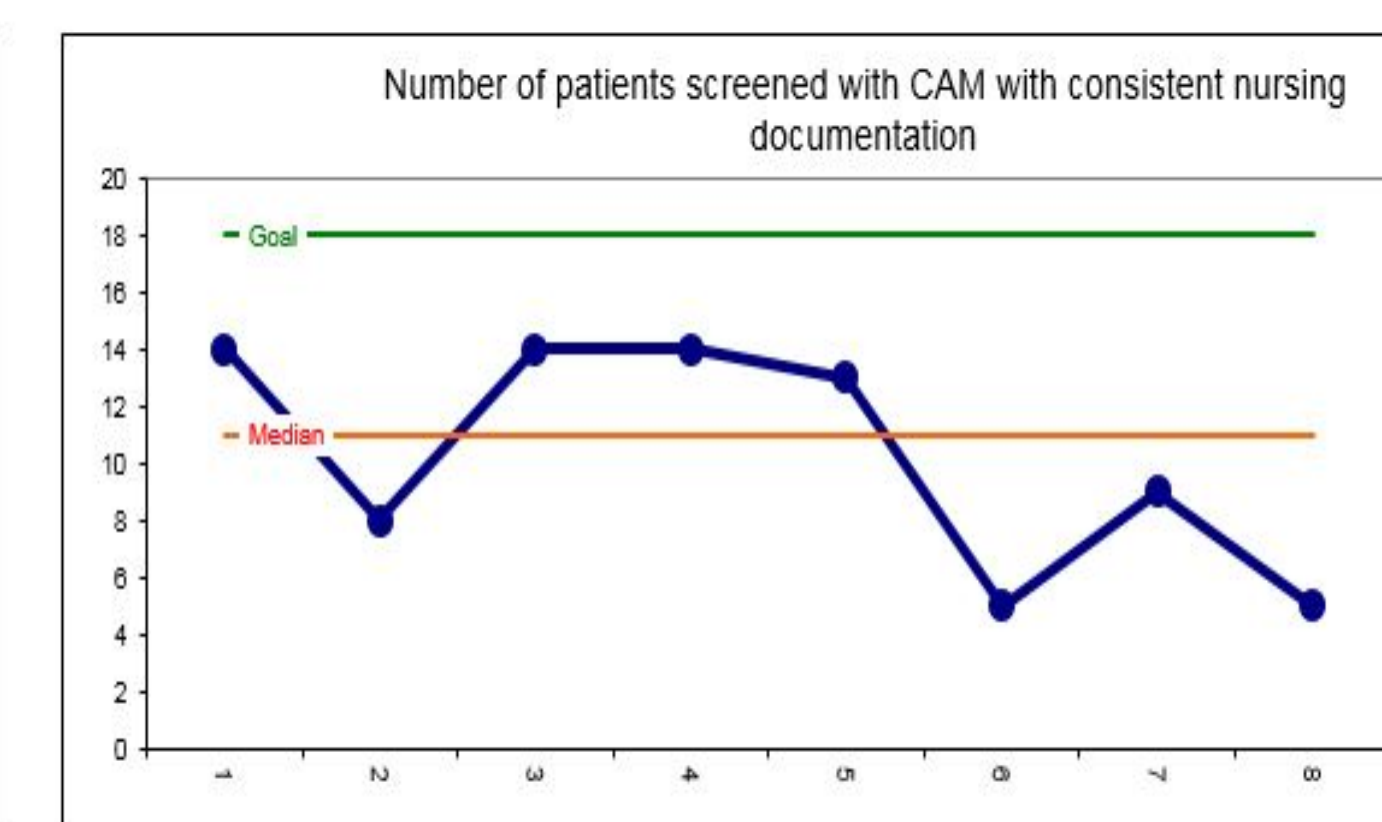

Fig 2. Consistent nursing documentation of CAM

Table 1. Number of times CAM tool used / delirium cases

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
Total No. times CAM used	198	266	359	470	447	409	395	475
Number of delirium cases	3	3	5	5	2	2	1	2
Number of positive CAM results	4	3	6	4	2	2	0	2

CAM educational sessions

- 7 sessions held in total; each session lasted 30 mins.
- No coverage was required for attendance at educational sessions.
- 80% target unit staff attendance achieved at these educational sessions.
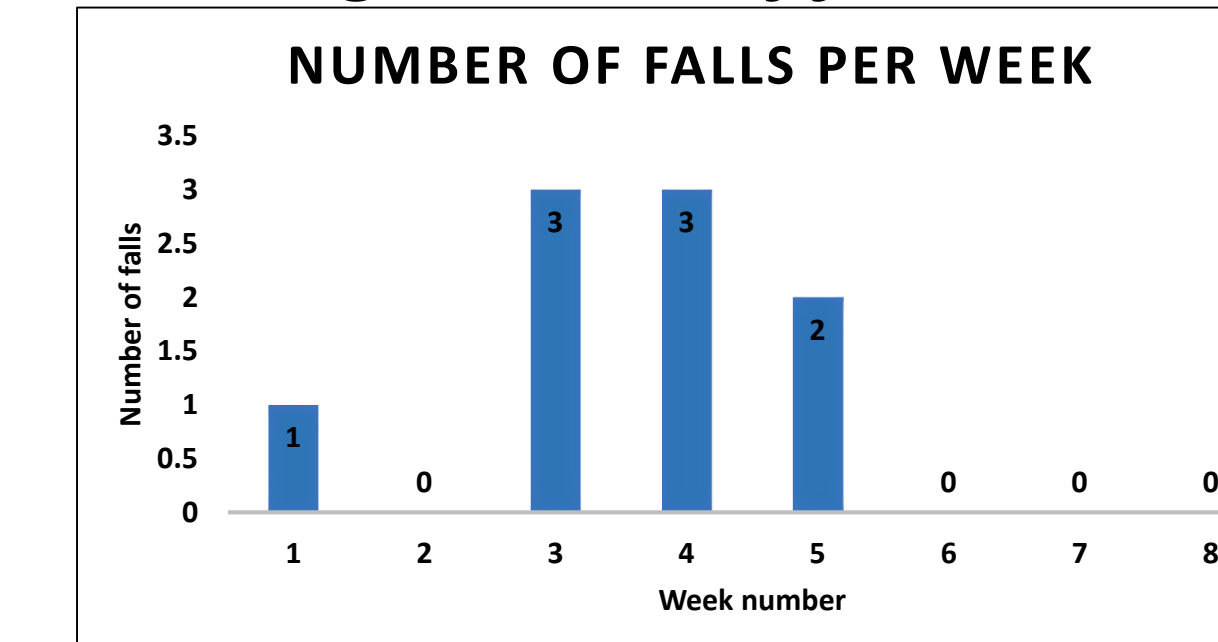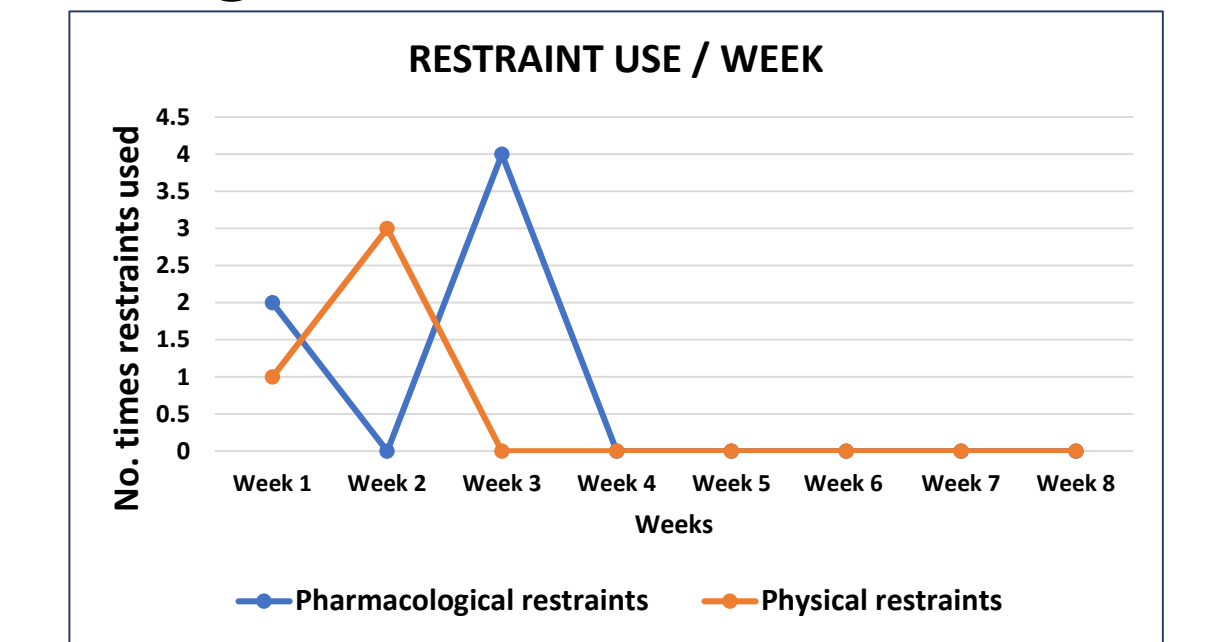
Complications

Figure 3. No of falls / week

Figure 4. Restraint use / week

Feedback from Nursing staff

Easy to use

100% felt they had received adequate training to use the CAM.

Improved assessments for delirium

It assisted with nursing documentation

It shortened their delirium assessment time

Several nursing staff had some difficulty with interpreting CAM results

One person reported difficulty performing CAM at the recommended time

Financial costs

- $220 in total (training / stationary costs)

Sustain Results

Reinforce Ownership, Measurement & Continuous Improvement

- Study results will be displayed and presented to the unit staff.
- Post study chart audits will be done 2 and 4 weeks post study completion, then quarterly for one year to follow trends in length of stay and complication rates. These results will be provided to the unit on a regular basis.

Share Learning

Lessons learned:

- Difficulties experienced with capturing all nursing staff for CAM education sessions.
- Ensuring the ongoing consistency of nursing documentation is an area area to be addressed for future cycles.
- Difficulty with 1. monitoring and ensuring communication between nursing staff and physicians and 2. measuring and reporting changes in assessment times for physicians & nursing staff.

Why this Quality Improvement matters
To Patients
Improvement in patient safety
Less time spent in hospitals and more time at home
To Albertans
Reduced strain to the system and improvement of care
To the healthcare system
Reduced healthcare expenditure

References

1. Marcantonio E, Ta T, Duthie E et al. Delirium Severity and Psychomotor Types: Their Relationship with Outcomes after Hip Fracture Repair. Journal of the American Geriatrics Society. 2002;50(5):850-857.
2. McAvay G, Van Ness P, Bogardus S et al. Older Adults Discharged from the Hospital with Delirium: 1-Year Outcomes. Journal of the American Geriatrics Society. 2006;54(8):1245-1250.
3. Pitkala K, Laurila J, Strandberg T, et at. Prognostic Significance of Delirium in Frail Older People. Dementia and Geriatric Cognitive Disorders. 2005;19(2-3):158-163.
4. Inouye SK, VanDyck CH, Alessi CA et al. Clarifying confusion: The Confusion Assessment Method. A new method for detecting delirium. Ann Intern Med.1990; 113:941-8.
5. Wei L, Fearing M, Sternberg E et al. The Confusion Assessment Method: A Systematic Review of Current Usage. Journal of the American Geriatrics Society. 2008;56(5):823-830.

Presentation PDF