Crocus Ward, Springfield University Hospital

Quality Improvement Project: Improving the recording of NEWS2 observations on an Older Adult Inpatient Psychiatric Ward

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INTRODUCTION

The National Early Warning System 2 (NEWS2) is a scoring system used to monitor 6 physiological parameters to detect physical deterioration of patients. NEWS2 has received formal endorsement from NHS England and NHS Improvement to become the early warning system for identifying acutely ill patients (1).

All inpatients at South West London and St George's Mental Health NHS Trust require once daily NEWS2 recording. These readings are directly recorded onto e-observations charts on our electronic clinical record system, Rio. For some patients, more than once daily monitoring is clinically indicated due to physical frailty or risk of deterioration.

Crocus Ward is a mixed-gender older adult inpatient psychiatric ward located at Springfield University Hospital in Tooting, London. We care for patients over the age of 75 with a functional mental illness or those of any age suffering from dementia. On Crocus ward, the frequency of NEWS2 readings is often increased to twice daily (BD), three times daily (TDS) or four times daily (QDS), depending on clinical need.

Following two serious incidents on the ward, the compliance with NEWS2 recording has been reviewed. Whilst Crocus Ward is consistently compliant with once daily NEWS2 scoring, our baseline data indicated that 80% of patients did not have the additional readings recorded if they were meant to have BD, TDS or QDS NEWS2 scoring.

We hypothesized that by using Quality Improvement (QI) methodology, improvements to practice could be made ensuring that all patients have their required NEWS2 recordings.

QI PROJECT AIM

For 100% of patients on Crocus ward to have the correct frequency of National Early Warning Score 2 (NEWS2) observations recorded on their e-observation charts by April 2023

The project was then extended to August 2023 to allow for further PDSA cycles.

Figure 1: Driver diagram
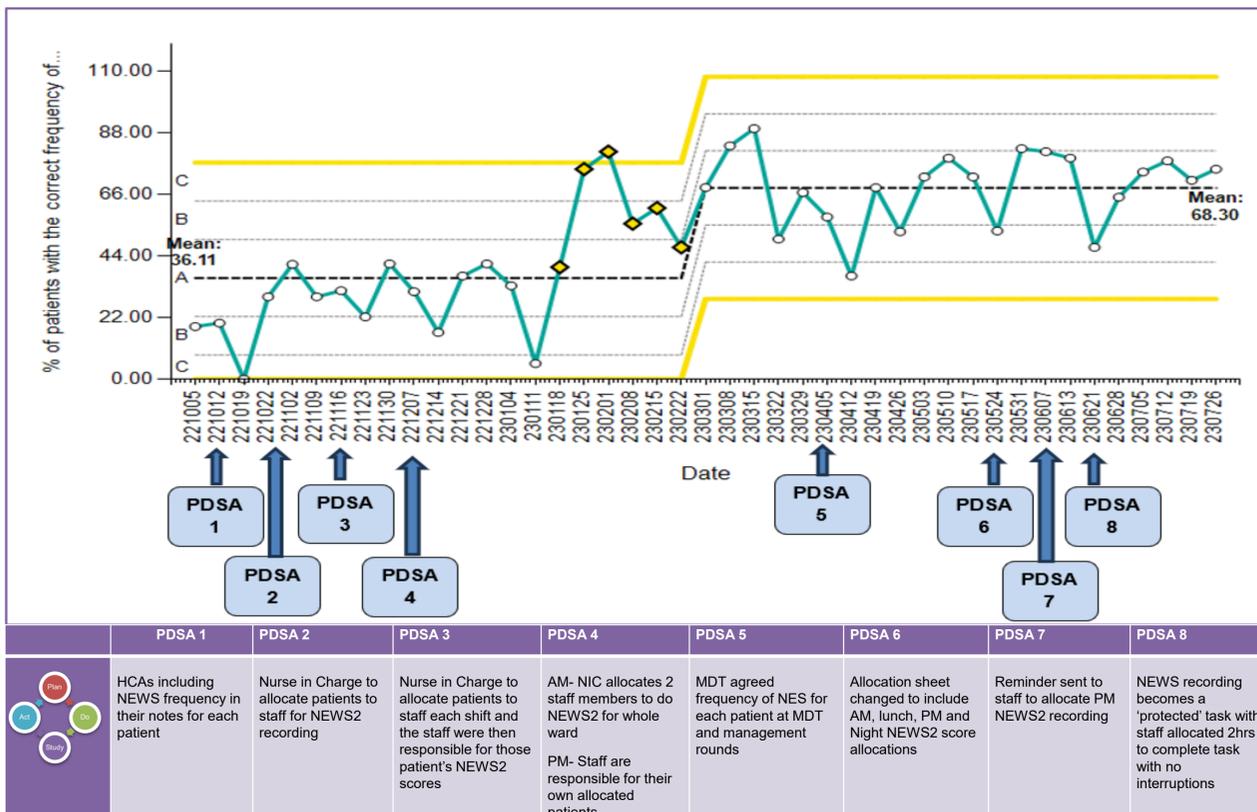
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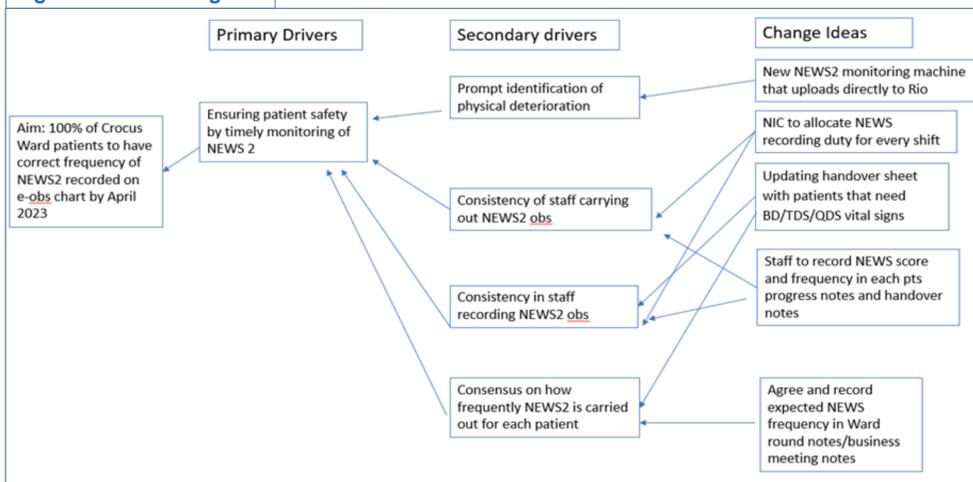
METHODS

We used QI methodology to improve the consistency of NEWS2 recording. We used a driver diagram to understand factors that needed to change and generate change ideas (figure 1). To measure improvement, each patient's NEWS2 chart was reviewed over the previous 7 days to ascertain compliance with recording. If any recordings for a patient had been missed over the past 7 days then this reduced the percentage compliance (figure 2).

The weekly percentage compliance was relayed back to the team at regular QI meetings. These measurements were then used to generate Plan Do Study Act cycles (PDSA).

Progress was plotted on a Statistical Process Control Chart (SPC), along with clear discussion about when each PDSA cycle had started and how this had translated into the data (figure 3).

Week 0 (baseline)			
Rio Number	Initials	NEWS Freq	7/7 days compliant? (Y/N)
XXXXXXX	YY	QDS	No
XXXXXXX	YY	BD	Yes
XXXXXXX	YY	OD	No
Number of patients:	ZZ		
Compliance rate:	ZZ		

Figure 2: Example Data Table

RESULTS

Through using QI methodology, we gradually increased the ward's compliance with NEWS2 monitoring. The main area of improvement was in those patients with more than once daily monitoring requirements.

At the beginning of the project, a baseline mean of 36.11% of NEWS 2 scores recorded each week was calculated. Following using PDSA cycles to trial and evaluate change ideas, an improvement was made that was maintained at a mean of 68.3% completion. Individual data points varied but, in the last 4 weeks of the project, NEWS2 score percentage completion was maintained at over 70%.

Of particular interest, PDSA 5 involved the MDT agreeing frequency of NEWS2 at Care Plan Review Meetings and MDT Management meetings. This resulted in a reduction of those patients requiring more than once daily NEWS2 scores from over 75% to under 50% of patients. However, this did not affect compliance with recording as much as anticipated. Whilst this idea was adopted, further PDSA cycles were required to achieve further improvement in compliance.

CONCLUSIONS

QI methodology was effective in creating meaningful and sustained improvement in compliance with NEWS2 recordings. However, we recognize that our aim was for 100% of patients to have the correct frequency of NEWS2 scores recorded and our project has not resulted in the achievement of this aim. The barriers to achieving this aim have been reviewed by the team and we have identified several areas that require further improvement:

1. Unreliability of IT systems
2. Lack of sufficient time for staff to complete the task
3. Nursing handover of increased/decreased NEWS2 requirement
4. Nursing allocation of NEWS2 recording for patients with more than once daily NEWS2 requirements

Despite the significant improvement, further improvements are urgently needed as patient safety is at risk. Our trust has used this project to review the practice of other wards and have established that there is a more systemic problem not just isolated to Crocus ward. The learning from our project is being shared across the organization to improve patient care.

Figure 3: SPC chart demonstrating project progress over time

	PDSA 1	PDSA 2	PDSA 3	PDSA 4	PDSA 5	PDSA 6	PDSA 7	PDSA 8
	HCAs including NEWS frequency in their notes for each patient	Nurse in Charge to allocate patients to staff for NEWS2 recording	Nurse in Charge to allocate patients to staff each shift and the staff were then responsible for those patient's NEWS2 scores	AM- NIC allocates 2 staff members to do NEWS2 for whole ward PM- Staff are responsible for their own allocated patients	MDT agreed frequency of NES for each patient at MDT and management rounds	Allocation sheet changed to include AM, lunch, PM and Night NEWS2 score allocations	Reminder sent to staff to allocate PM NEWS2 recording	NEWS recording becomes a 'protected' task with staff allocated 2hrs to complete task with no interruptions

REFERENCES
1. Royal College of Physicians (2017). National Early Warning Score (NEWS) 2 [online] Royal College of Physicians. Available at: https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2.0

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