

Improving the visibility of patient oxygen requirement and ceiling of care in a COVID High Dependency Unit

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INTRODUCTION TO QUALITY IMPROVEMENT PROJECT

Why are we doing this quality improvement project?

Whilst working within a respiratory high dependency unit during the coronavirus pandemic, there was often up to ten critical continuous positive airway pressure (CPAP) patients at one time. As a result, HDU staff encountered problems of accurately tracking and being aware of the oxygen requirement of each individual patient - as observation charts are kept within closed bays. This requires health care staff to don up in full personal protective equipment (PPE) to enter the bay and clarify oxygen requirement. With numerous critical patients, it was essential that all ward staff had an awareness of these patients' oxygen requirements and escalation status should an emergency occur.



METHOD CONTINUED

Bed	PT	Ceiling of care	O2 mode	FiO2
A1	XX	CPAP ceiling DNAR	CPAP P12	75%
A3				
A4				
A6				
B1				
B3				
B4				
B6				
SR1				

The team initiated a PDSA cycle to test the theory that a well-designed whiteboard would improve staff confidence levels.

PLAN – a whiteboard was designed based on stakeholder input

DO – the whiteboard was used for 30 days by stakeholders

STUDY – see analysis section

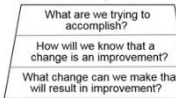
ACT – see next steps section

QI SMART AIM STATEMENT

From 1st April 2021 onwards, 100% of staff on Ward 1 Alexandra Hospital will be confident in identifying the oxygen requirement and escalation status of all patients, without having to enter closed COVID HDU bays

METHOD

Model for Improvement



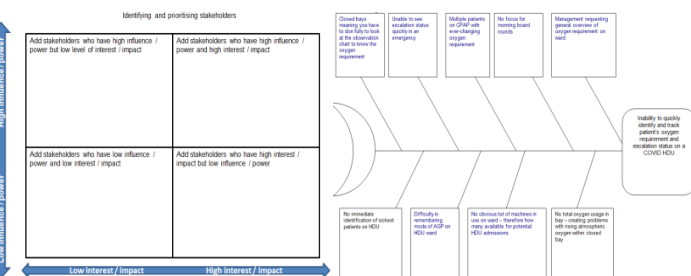
We used the NHS model for improvement to complete our QI project.

Our project was tracked using Worcestershire Acute Hospitals Trust's improvement tracker – see steps below.

We undertook QI training and sought QI coaching to help us understand the use of QI tools.



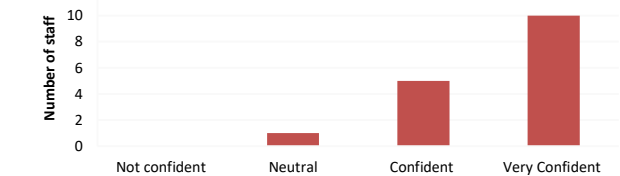
Stakeholder analysis was completed to ensure those impacted, and those able to influence were engaged in the outcome of this project. A stakeholder survey was undertaken to identify problems causing poor confidence in identification of oxygen requirement – we used a fishbone model for this. The stakeholder survey captured baseline information measuring initial self-assessed confidence level, and also invited ideas for change which were summarised and prioritised, using the QI priority grid tool.



ANALYSIS AFTER IMPROVEMENT INTERVENTION

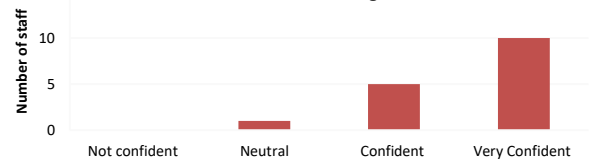
Oxygen requirement - Pre-whiteboard, 88% of staff were either not confident or neutral, in being able to identify patient oxygen requirement. This is compared to 100% of staff feeling neutral to very confident in identifying patient oxygen requirement, of which 94% were confident or very confident after whiteboard implementation.

Post-whiteboard – staff confidence in identifying oxygen requirement without having to enter closed bays



Escalation status - Pre-whiteboard, 75% of staff were either not confident or neutral, in being able to identify patient escalation status. This is compared to 100% of staff feeling neutral to very confident in identifying patient escalation status, of which 94% were confident or very confident following whiteboard implementation.

Post-whiteboard – staff confidence in identifying escalation status without consulting notes



100% of staff found the whiteboard easy to very easy to use, and 100% of staff would continue using the whiteboard in future.

CONCLUSION

By using QI tools, the project leads were able to understand the problem as described by stakeholders, engage stakeholders in the solution design, and see positive results using agreed QI metrics. This simple, low cost intervention significantly increased HDU staff confidence in identifying all patients' oxygen requirement and escalation status, resulting in improved patient safety. Zero staff members reported being not confident in identifying patients' oxygen requirements and escalation status. 100% of staff found the whiteboard easy to use, and would continue to use it in the future. This whiteboard facilitated twice daily board rounds with ITU regarding bed capacity and oxygen consumption, allowing for ease of communication between critical care units.

NEXT STEPS

Moving forward, this whiteboard has been transferred to a non-COVID respiratory unit, and has the potential to be adapted to other specialities. Project leads plan to present this poster in upcoming medical meetings so other departments can be encouraged to utilise a whiteboard, which can be easily edited to suit the ward, and requires little to no staff training, whilst still producing a low cost, high impact intervention.