

Improving Efficiency And Patient Safety At The Point Of Admission; The Introduction Of Portable Procedural Equipment Stations

Pinder AG^{1,*}, Jackson D¹, Smiley K¹, Dhokia V¹

¹Sherwood Forest Hospitals NHS Trust

*Corresponding author

Introduction

Admitting acutely unwell patients to the critical care can represent a busy and challenging time, particularly out of hours or in the context of surge into areas not usually utilised for delivery of intensive care. Admissions in this context increased dramatically during the Covid-19 pandemic within our district general hospital critical care unit.

At the point of admission it is usual for the team to perform a number of practical procedures in order to stabilise the patient, ranging from vascular access to intubation. During the pandemic, it was noted that efficiency and potentially patient safety were being compromised by the time taken to locate essential equipment required to carry out the frequent, urgent and specialist procedures that are often performed at admission.

Objectives

This quality improvement project set out to address this shortfall by introducing mobile procedure stations that were fully stocked with the required equipment/paperwork and provided a cleanable working surface. In addition to the trust cardiac arrest trolley, four different stations were introduced. A general admissions station (Intravenous, central and arterial access, blood cultures, nasogastric tube insertion, urinary catheter insertion) and 3 specialist procedure stations; an intercostal chest drain station, airway station and a percutaneous tracheostomy/lumbar puncture station. A spare general admissions station was kept stocked in a store room so that after use stations could be replaced immediately. Laminated contents lists with photographs of drawer layouts were attached to ensure ease of restocking. Healthcare support workers were responsible for ensuring restocking and rotation. Stations were sealed before being positioned in designated positions, marked on the floor, in each of the different clinical areas. The stations were designed to be easily cleaned to conform to infection control protocols and colour coded to ensure rapid identification in emergent situations.



Figure 1. Colour coded work stations sealed and ready for use on the intensive care unit



Figure 2. Drawers are organised to be procedure specific and contain multiples of all the required items.

Methods

To assess time savings and gain feedback from users we asked medical staff to complete an electronic questionnaire before and after introduction.

Results

The 12 responders reported performing, on average 4 procedure per admission. Pre-intervention the average reported time taken to find equipment need was reported to be 22.5 minutes, with a further average 18.5 minutes taken by a second member of staff, usually bedside nursing staff. Post intervention these reported times fell to 7.5 minutes and 7 minute respectively, a time saving of 40.7 minutes (65%). In 2018/2019 our unit admitted 788 patients¹, therefore over a year we could potential save up to 535 hours, with the financial and patient care implications being obvious. The post intervention questionnaire contained a significant number of positive comments regarding the stations from staff, a frequent theme being the portable nature of the stations.

Conclusions

This simple intervention is clearly able to improve patient safety, reduce frustration amongst staff as well as save time and money. The portable nature of the stations allow them to be used in other areas when required such as theatre, recovery, radiology and the emergency department, a feature which has been particularly beneficial during the Covid-19 surge. Other units may want to consider this set up as a way of improving safety and efficiency. We would be more than happy share the station contents lists we have developed with any interested parties.



References

¹<https://onlinereports.icnarc.org/Reports/2018/12/annual-quality-report-201718-for-adult-critical-care>