Taking practice to the peripheries on Neuro-ICU
Developing future leaders through quality improvement

Aim: Quantify medication errors within neurosurgical-ICU

Methods: Data from 99 patients was collected over 36 days during consultant-led ward rounds. Interventions gathered via electronic prescriptions and analysed on excel.

Results:
- Addition of new treatment: 128 prescriptions
- Administration optimisation: 81 prescriptions
- Dose adjustment: 128 prescriptions
- Drug discontinuation: 1 prescription
- Drug monitoring: 21 prescriptions
- Drug switch: 61 prescriptions

Four medication errors per patient, prevented by specialist pharmacists working collaboratively in ward rounds.

Conclusion: Medication errors are an understudied component of patient management in neurosurgery and are inevitable in human-driven systems. Prescribing errors are known to account for a substantial proportion of all medication errors and are an important cause of harm to patients. Multi-disciplinary ward rounds with the involvement of pharmacists should be a priority as a patient safety initiative. This intervention addresses both environmental and individual factors.

Ward rounds are an excellent opportunity to develop the core domains of leadership for junior colleagues from all specialties. This one opportunity exists in all settings, all wards, enhancing patient care and delivering excellence.

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Developing future leaders through quality improvement-themed webinars

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the data, and how to publish the results, with the focus on the speakers’ personal experiences.

Results The pre-series survey was completed by 36 attendees out of 51 participants. All participants were affiliated with a healthcare course. 92% (n=33) indicated their interest in QI/leadership but 83% (n=30) reported to have never participated in any QI projects before and 78% (n=28) reporting minimal or no confidence with applying QI techniques in practice. The main barriers to carrying out a project were the lack of knowledge (81%, n=29), support (50%, n=18) and time (33%, n=12).

The results from our interim survey demonstrates student’s interests in QI as well as the lack of exposures to QI training and projects. Short webinars focusing on educating as well as inspiring healthcare students can help introduce QI to the future healthcare leaders.

Methods To understand existing processes and identify areas for improvement, baseline data was gathered and a ‘process mapping’ meeting was held. Improvements were implemented using Plan-Do-Study-Act (PDSA) methodology.

A QI committee involving key stakeholders met fortnightly to discuss project progress.

Results Interventions were varied but included introduction of a pre-transfusion bedside safety checklist and staff transfusion training via a sustainable video.

Documentation of critical patient identifiers improved both on transfusion request forms and at transfusion initiation. Completion of the bedside safety checklist was 65.5% by three months.

Knowledge scores improved following transfusion training. 77% of staff strongly agreed and 21% agreed that the training was useful.

Importantly, team members from both organisations reflected on their personal learning and development through the experience.

Discussion Initial progress was promising. Further work is needed to improve allocation of unique patient identification numbers and the safety of laboratory blood grouping and cross-match procedures.

Challenges included short-staffing and government hospital strikes; subsequently the Covid-19 pandemic has limited ongoing QI work since February 2020.

This collaborative system-strengthening project provided varied, reciprocal learning experiences for individuals from both organisations, including skills in leadership, teamwork, teaching, QI methodology, communication and IT. We believe that active reflection is a vital tool in the evaluation of QI work carried out in resource-limited settings in partnership with overseas organisations. Our experiences will help to inform ongoing work at MAH and may be of interest to others conducting QI work in similar settings.