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Improving fluid balance charts through staff education on a general medical ward: a quality improvement project

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Introduction

From personal experience, inaccurate and incomplete fluid balance charts are a common issue across medical wards. An accurate fluid balance chart is important as it allows medical teams to monitor patient input and output. Fluid balance charts are of particular importance when a patient is on intravenous (IV) fluids and it is a key recommendation in National Institute for Health and Care Excellence (NICE) guidelines that patients have regular monitoring of fluid balance over each 24-hour period.[1] As well as those patients on intravenous fluids, monitoring fluid balance is important in all patients, especially those who are being treated for acute kidney injury (AKI) and decompensated cardiac failure. The same NICE guidance highlights that there is a lack of staff education on the importance of fluid balance, and it is often left to the most junior staff to monitor, for example healthcare assistants.[1] Because of this, fluid charts are often overlooked as these staff don't realise their importance. This project hoped to address this.

Method

To set a baseline, data were collected from ten patients at random on five different days. Data were also collected on age and diagnosis. Data were collected on whether fluid input during the day had been totalled (baseline average 70%), whether fluid output had been totalled (baseline average 36%) and whether the difference or total fluid balance for that day had been totalled (baseline average 14%).

After this baseline, a goal was set of substantially improving the completion of fluid balance charts within a 4-month rotation on the ward.

Due to the NICE recommendation about improving staff education and following discussions with staff on the ward, the quality improvement project focused on staff education as an area to target for improvement. As part of the quality improvement project, the plan, do, study, act (PDSA) cycle method was followed. There was limited improvement after the first PDSA cycle. After reassessment of the second PDSA cycle, completion of fluid charts improved to an average fluid input total of 97.5%, fluid output total of 92% and total fluid balance of 61%. See Fig 1 for run chart.

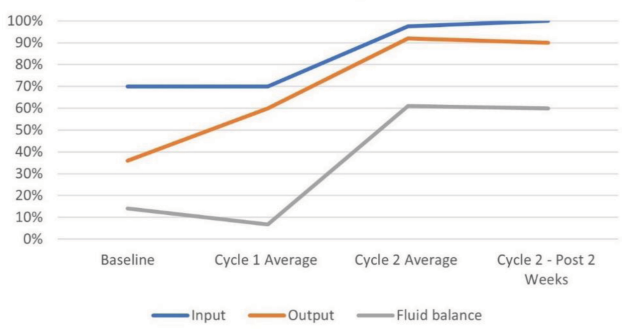

Fig 1. Fluid chart completion of input, output and fluid balance at baseline and after each plan, do, study, act cycle.

Results

Baseline completion of fluid charts on the ward was poor before the quality improvement project. With rather simple interventions targeting staff education, there was a substantial improvement.

Conclusion

By publishing the findings of this quality improvement project, it is hoped that that colleagues in other hospitals will be able to undertake similar quality improvement projects and make similar effective changes to staff education to improve fluid chart completion and ultimately patient care and safety. ■

Reference

1 National Institute for Health and Care Excellence. *Intravenous fluid therapy in adults in hospital: Quality standard [QS66]*. NICE, 2014. www.nice.org.uk/guidance/qs66/documents/intravenous-fluid-therapy-in-adults-in-hospital-qs-briefing-paper2 [Accessed 10 March 2022].

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