An evaluation of volume status assessment in acute kidney injury: a quality improvement project

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Aims

To evaluate the assessment of volume status and monitoring of fluid balance for adult inpatients on a general medical ward following the introduction of an acute kidney injury (AKI) management tool.

Methods

Baseline data were collected for 35 days at a district general hospital. Patients were identified prospectively using a biochemistry electronic alert system and data were collected using a standardised pro forma. We recorded three process measures: clinical assessment of volume status, fluid balance chart in place and fluid balance chart compliance.

The baseline data suggested a lack of structure in the assessment and management of AKI. To address this, an AKI steering group developed a simple AKI tool intended to provide a systematic framework based on the recommendations of the National Confidential Enquiry into Patient Outcome and Death report *Adding insult to injury*. The AKI tool was designed as a sticker with a series of tick boxes that could be easily placed in a patient's medical notes following an AKI alert. Teaching sessions were delivered to the ward staff prior to implementation of the AKI tool. A re-audit assessed the effect of the AKI tool.

Results

From the baseline data (n=15), 53% of patients had their volume status clinically assessed; following the introduction of the AKI tool and teaching, this increased to 71% (n=35).

Also there was an increase from 67% to 92% of patients with a fluid balance chart in place, which was statistically significant (p=0.03).

For patients with a fluid balance chart in place, 85% (n=33) of patients had a compliant fluid balance chart, compared with 44% (n=9) from the baseline data.

Further analysis of the re-audit data showed that of the 25/35 patients who had their volume status assessed, 13 patients had an AKI tool sticker in their notes and 12 did not.

Conclusions

In conclusion, this project demonstrated that implementation of a simple AKI tool combined with a structured teaching programme can improve some components of the assessment and management of patients with an AKI. One of the main learning points of the project was that the success of the AKI tool required the cooperation and engagement of each member of the multidisciplinary team. To maintain this change in practice, refresher teaching sessions are necessary. Also, based on our limited analysis, we recommended that an AKI lead nurse be introduced who could develop the AKI tool further and would be an established point of contact for ward staff. ■

Conflict of interest statement

None declared.

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