Implementation of a new way to assess and document fluid balance

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Background

The need for accurate monitoring of a patient's fluid balance status is a key component of the Acutely Ill competencies produced by National institute of Health and care Excellence (NICE). Timely and appropriate use of fluid balance observation and recording is an essential tool in determining adequate hydration. Work undertaken looking at the incidence of Acute Kidney Injury concluded that the overall incidence of AKI at CMFT was 1 in 5 patients (20%), with the most common causes being sepsis and dehydration. The prevention of the development of AKI was found to reduce the average length of stay by 4 days and also impacted on the use of critical are beds and mortality.

Monitoring of fluid balance in acute kidney injury (AKI) is a key intervention for most of the pathways or check lists developed by various organisations but has notoriously been inadequately or inaccurately completed. Audit reviews of emergency bleep calls and incident investigations within our organisation, found that fluid balance monitoring was not always completed to the necessary standard and set trust policy.

Method

The work was undertaken combining the safer clinical systems approach and basing the project implementation on the trust improvement quality process.

The Health Foundation Safer Clinical systems tools were utilised to identify the areas of risk in the current process of fluid balance monitoring. Process mapping found that there were significantly high risk scores associated with the process and review of the fluid balance policy, and confirmed gaps in guidance and complicated escalation procedures demonstrating the need to change current practice. Workshops and focus groups were held with healthcare workers to ascertain the issues of current practice, and to ask for ideas for the improvement work. This confirmed a lack of ownership and accountability for the completion of fluid balance leading to non-compliance with standards and failure to accurately monitor a patient's hydration status.

A baseline audit was completed in three areas which were the acute admissions areas and a hepatology ward area chosen for their high acuity in patient turnover. The audit results mirrored the workshop findings and demonstrated we needed to change the fluid balance process and documentation.

Results

In total 90 patients were audited for the appropriateness of being on a fluid balance chart. We found 15% of patients were on a fluid balance chart unnecessarily, 30% of patients who were at risk were not on any form of fluid balance monitoring and only 20% of fluid balance charts that were in use were fully completed. After developing a new streamline pathway and new charts a pilot study was carried out in 3 key ward areas, 10 patients from each area were audited against 8 set criteria's. The overall compliance increased from 62% to 91%.

These results led to the development of the new hydration pathway which consists of a daily hydration assessment which guides the staff to select the appropriate chart this being either a hydration chart for a low risk patient or a fluid balance chart for a high risk patient there is also a section for when it is not applicable for the patient to be monitored thus reducing the number of patients being on monitoring unnecessarily. This has shown the implementation of this new pathway has demonstrated a significant increase in compliance with fluid balance standards including the appropriate early escalation of fluid balance issues, leading to improved patient safety.

Conclusion

Following the successful trialling in the pilot areas the results improvement in patient safety and outcomes led to the pathway being adapted throughout the adult inpatient areas in our trust. Compliance has been continuously monitored by the AKI and Acute Care Team and also by including fluid balance standards in the quality care rounds which are completed monthly by the ward teams. A continuing education programme is in place including induction, yearly mandatory training for all clinical staff and ward updates. Plans are in place to go paperless with regards to fluid balance monitoring.