young adults. Its presentation is variable and non-specific, making diagnosis difficult. Systemic anticoagulation is the first-line treatment, but many patients deteriorate despite this and there is a lack of clear guidance on the management of these patients.

Objectives To characterise the patient population at our institution and evaluate their diagnosis, management and prognosis.

Methods We performed a retrospective, single-centre audit of 29 patients with CVST who were aged between 1 month and 16 years at diagnosis between 2014 and 2021. Patients' time of admission/discharge, presenting symptoms/signs, diagnostic imaging, treatment modalities and follow-up outcomes were recorded via review of electronic patient records. These were compared to a set of standards based on the American Heart Association/American Stroke Association and the British Journal of Haematology guidelines for paediatric CVST.

Results 29 patients (15 female, 14 male) were identified with a mean age at diagnosis of 7.5 years (range 30 days to 15.8 years). 12 presented acutely within 4 days, 10 subacutely and 6 chronically after 14 days of symptoms. The most common signs and symptoms were nausea/vomiting (18/29), decreased responsiveness (14/29) and headache (14/29). The most common risk factor was anaemia (15/29). 11/29 patients had thrombophilia testing with 1 testing positive. Most patients were diagnosed with CT venography and the sigmoid sinuses were most commonly involved. 24/29 patients underwent heparinisation, with 19 of these receiving a full-dose for 7 days. Some patients deteriorating despite anticoagulation were treated with decompressive craniotomy (3/29) and/or endovascular interventions (2/29). Average follow-up time was 19.6 months. 17 patients (59%) achieved full symptom resolution and 5 had complete radiological recanalisation. 1 patient had a recurrence and 4 patients died.

Conclusions Children with CVST at our institution were a heterogeneous population. Most patients received and fully recovered on systemic anticoagulation with heparin. Efforts should be made to switch patients to warfarin once stable and to de-escalate anticoagulation after resolution of thrombus or risk factors. Patients not responding to anticoagulation may be offered decompressive craniectomy or endovascular treatment, but the precise indications for these are undefined.

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IMPROVING THE EFFICIENCY OF A TREATMENT ROOM IN A LONDON TERTIARY CHILDREN'S HOSPITAL

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Background Doctors report that collecting equipment for intravenous (IV) cannulation from the treatment room (TR)

was a time-consuming and inconsistent process. Delays in this common paediatric procedure can prolong medical interventions resulting in sub-standard care and negatively impacting patient safety.

Objectives To reduce the time for HCPs to collect essential IV cannulation items from the TR by 25% over a 5 month period.

Methods HCPs, including doctors, nurses and healthcare assistants (HCA) helped to brainstorm factors contributing to the delay in collecting cannulation equipment which were collated into a 'Cause and Effect' diagram. Using a Plan-Do-Study-Act approach, the following interventions were derived:

1. To reorganise and re-label the IV cannulation trolley in the TR and create a 'how to stock' card;
2. To introduce a 'stocking request whiteboard' into the TR to ease communication of missing items between staff.

The primary outcome was the time taken to collect IV cannulation items, measured using weekly time trials based on a pre-designed scenario. Questionnaires of different HCPs were conducted following each intervention.

Results At baseline, the median time to collect IV cannulation equipment was 302 seconds (range 155–374 seconds). A run chart demonstrated a sustained reduction in median time taken to collect items over 5 months. Post-intervention 1, the median time was 111 seconds (range 50–309 seconds), a decrease of 63% from baseline. Post-intervention 2, the median time was 83 seconds (range 77–142 seconds), an overall decrease of 73% from baseline.

Feedback from questionnaires was universally positive. Following both interventions, HCPs were 33.4% more likely to find all required items in the TR and reported an increase in knowing what to do when items were missing (positivity score increased by 66.7%). The HCA reported an increase in knowing which items were out stock (positivity score increased by 150%) and where to stock them (positive score increased by 33%).

Conclusions Simplifying the process of restocking the IV cannulation trolley and implementing a system of communicating missing items reduced the median time taken for HCPs to collect essential IV cannulation items by more than half. The sustained reduction suggests simple interventions can improve efficiency, crucial at a time when staff are overstretched during the COVID-19 pandemic.

There are many confounding factors in this study which could have affected the time trials including the unfamiliarity of new HCPs with the TR and staff redeployment and sickness affecting re-stocking of items. As a result, we liaised with the ward matron to identify a designated person to regularly stock the TR which will be key to sustainability. Other institutions report similar results in improving efficiency of collecting items through disseminating standardised cannulation trolleys.¹ Other wards in the hospital could replicate our interventions to improve efficiency.

REFERENCE

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