Improving Processes of returning blood during emergencies/conclusion in continuous renal replacement therapy (CRRT)

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Introduction
CRRT is a form of dialysis that is prescribed for patients who are hemodynamically unstable. During the termination of CRRT, blood in the circuit will be returned back to patient to prevent hypotension and blood loss. Currently, the process of returning blood requires numerous consumables, long procedure time and most importantly breaking the chain of the closed-system.

Objectives
To improve the efficiency for the returning of blood in CRRT by shortening the time frame by 50%.

Analysis of problem

Methodology
Implementation: PDSA 1 - Equipment on Gathering Consumables

Before
Time consuming to gather the consumables from different locations.

After
Pre-bundle pack reduced time taken in gathering consumables.

Implementation: PDSA 2 - Process on Closed-System Method

Before
Initiation of CRRT (Old Method)

After
Initiation of CRRT (New Method)

Pre-connection of normal saline 0.9% allows closed-system during termination of CRRT.

Results
The run chart (Fig. 2) indicates the time taken to return blood in CRRT pre and post implementation of the closed method. In comparison to the number of steps required in Fig. 3, the time saved was ~10 mins.

Conclusion
The new process has improved the efficiency for the returning of blood in CRRT. With 4 the closed method in place, it has helped to reduce man-hours as well as risk of infection. This also reduced the stress in our healthcare workers and blood borne exposure risk to them. With the positive outcomes and feedbacks gathered from participants, the new process will be implemented to other areas handling CRRT.