

ABSTRACT

A TIME AND MOTION STUDY OF PERIPHERAL VENOUS CATHETER FLUSHING PRACTICE USING MANUALLY PREPARED AND PREFILLED FLUSH SYRINGES.

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Introduction: Peripheral venous catheters (PVCs) are the simplest and most frequently used device in the hospital setting, however they are associated with inherent complications. There are a range of strategies to prevent or reduce complications that include the use of intermittent flushing.

Objective: The aim of this study was to observe the nursing practice of flushing PVCs in a simulated ward setting (laboratory) when using two different flushing syringes.

Methods: The study used an observational time and motion design to gather data on preparation and use of manually prepared flushes compared to prefilled flush syringes. It also identified adherence to principles of ANTT and organisational protocol on PVC.

Results: Seven of the 12 nurses invited to participate in the study were available and agreed to participate. Each completed 10 scenarios: 5 manually prepared and 5 prefilled syringe flushes. A total of 70 scenarios were observed (35 in each arm). The mean total flushing time was 169 seconds for manually prepared flushes and 120 seconds for prefilled flushes, with a mean difference of 49 seconds (95% CI, 35-64, $P > .001$). All participants adhered broadly to the principles and steps of ANTT, with the exception of the use of personal protective equipment (PPE) and hub decontamination. In general, there was low awareness and a lack of adherence to the organisational protocol for administration of a PVC flush.

Conclusion: This observational study quantified preparation and administration time and identified deviation from aspects of ANTT and organisational protocol on PVC flushing when using manually prepared and prefilled syringes.