

**Time-based infection control measures, such as scrubbing the hub, must be implemented with aids that qualify specific times to account for human factors, to ensure adherence to time-dependent measures aimed at decreasing nosocomial infections” Caspari et al (2017).**

Abstract:

**BACKGROUND:** The use of catheter hub decontamination protocols is a common practice to reduce central line-associated bloodstream infections. However, few data exist on the most effective disinfection procedure prior to hub access accounting for human factors and time-dependent practices in real time in the clinical setting.

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**METHODS:** An observational design with a multimodal intervention was used in this study in a neonatal intensive care unit. Direct observations on nurse compliance of scrub times with decontamination when accessing of venous catheter and feeding tube hubs were conducted during 3 phases: (1) baseline period prior to any interventions; (2) during an educational intervention phase; and (3) during a timer intervention period when using a timing device, either an actual timer or music button.

**RESULTS:** Overall, both education and the timing device interventions increased the mean scrub time  $\pm$  SD of venous catheter hubs. Mean baseline scrub times of  $10 \pm 5$  seconds were lower compared with  $23 \pm 12$  seconds after educational intervention ( $P < .002$ ) and  $31 \pm 8$  seconds with timer or music button use ( $P < .001$ ). Timer intervention scrub time was also more effective than education alone ( $P < .05$ ). Similar findings were observed with scrub times of feeding tubes.

**CONCLUSIONS:** Time-based infection control measures, such as scrubbing the hub, must be implemented with aids that qualify specific times to account for human factors, to ensure

adherence to time-dependent measures aimed at decreasing nosocomial infections.

Reference:

Caspari, L., Epstein, E., Blackman, A., Jin, L. and Kaufman, D.A. (2017) Human factors related to time-dependent infection control measures: “Scrub the hub” for venous catheters and feeding tubes. American Journal of Infection Control. February 15th. .

doi: 10.1016/j.ajic.2017.01.004.

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