

This experimental study compares the effects of interruptions on simulated performances of central venous catheterization during a highly versus minimally complex portion of the task” Jones et al (2017).

Abstract:

BACKGROUND: Interruptions are common in the healthcare setting. This experimental study compares the effects of interruptions on simulated performances of central venous catheterization during a highly versus minimally complex portion of the task.

ReTweet if useful... Impact of clinical interruptions on trainee performance during central venous catheterization <https://ctt.ec/aUWy8+> @ivteam #ivteam

Click To Tweet

METHODS: Twenty-six residents were assigned to interruptions during tasks that are (1) highly complex: establishing ultrasound-guided venous access (experimental group, n = 15) or (2) minimally complex: skin cleansing (control group, n = 11). Primary outcomes were (a) performance scores at three time points measured with a validated checklist, (b) time spent on the respective tasks, and (c) number of attempts to establish venous access.

RESULTS: Repeated measure analyses of variances of performance scores over time indicated no main effect of time or group. The interaction between time and group was significant: $F(2, 44) = 4.28$, $p = 0.02$, and partial $\eta^2 = 0.16$, indicating a large effect size. The experimental group scores decreased steadily over time, while the control group scores increased with time. The experimental group required longer to access the vein (148 s; interquartile range (IQR) 60 to 361 vs. 44 s; IQR 27 to 133 s; $p = 0.034$). Median number of attempts to establish venous access was higher in the experimental group (2, IQR 1-7 vs. 1, IQR 1-2; $p = 0.03$).

CONCLUSIONS: Interruptions during a highly complex task resulted in a consistent decrement in performance scores, longer time required to perform the task, and a higher number of venous access attempts than interruptions during a minimally complex tasks. We recommend avoiding interrupting trainees performing bedside procedures.



Full Text

Reference:

Jones, J., Wilkins, M., Caird, J., Kaba, A., Cheng, A. and Ma, I.W.Y. (2017) An experimental study on the impact of clinical interruptions on simulated trainee performances of central venous catheterization. *Advances in Simulation*. February 14th. eCollection 2017.

doi: 10.1186/s41077-017-0038-1.

Thank you to our partners for supporting IVTEAM