

“We conducted a replicated crossover design study to assess if using one’s dominant hand for operating a probe vs directing a needle would affect the time taken, the number of needle passes and the accuracy of an ultrasound-guided procedure in phantom models” Johnston and Stafford (2015).

Reference:

Johnston, D.F. and Stafford, M. (2015) Dominant hand operating probe vs needle: a comparison study of ultrasound-guided needle placement in phantom models. Anaesthesia. April 7th. .

Summary:

We conducted a replicated crossover design study to assess if using one’s dominant hand for operating a probe vs directing a needle would affect the time taken, the number of needle passes and the accuracy of an ultrasound-guided procedure in phantom models. Twenty ultrasound-novice participants completed the task 10 times for each hand arrangement (alternating between attempts). The time taken and number of needle passes required for both dominant hand-probe and hand-needle decreased over time ( $p = 0.001$ ). Dominant hand-needle had a lower mean time used ( $p = 0.001$ ) and fewer needle passes ( $p = 0.02$ ) compared with hand-probe. Sixty-five per cent of participants preferred using their dominant hand to direct the needle. When learning ultrasound-guided needle procedures on phantom models, use of the dominant hand to operate the needle is associated with a shorter procedure time and fewer needle passes.

**Thank you to our partners for supporting IVTEAM**