

## **Our study demonstrates that nurses use double checks before administering high-alert medications. Use of a double check increases certain error detection rates in some circumstances, but not others” Douglass et al (2017).**

### Abstract:

Study objective: The use of a double check by 2 nurses has been advocated as a key error-prevention strategy. This study aims to determine how often a double check is used for high-alert medications and whether it increases error detection.

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Methods: Emergency department and ICU nurses worked in pairs to care for a simulated patient. Nurses were randomized into single- and double-check groups. Errors intentionally introduced into the simulation included weight-based dosage errors and wrong medication vial errors. The evaluator recorded whether a double check was used, whether errors were detected, and observational data about nurse behavior during the simulation.

Results: Forty-three pairs of nurses consented to enroll in the study. All nurses randomized to the double-check group used a double check. In the single-check group, 9% of nurses detected the weight-based dosage error compared with 33% of nurses in the double-check group (odds ratio 5.0; 95% confidence interval 0.90 to 27.74). Fifty-four percent of nurses in the single-check group detected the wrong vial error compared with 100% of nurses in the double-check group (odds ratio 19.9; 95% confidence interval 1.0 to 408.5).

Conclusion: Our study demonstrates that nurses use double checks before administering high-alert medications. Use of a double check increases certain error detection rates in some circumstances, but not others. Both techniques missed many errors. In some cases, the second nurse actually dissuaded the first nurse from acting on the error.

### Reference:

Douglass, A.M., Elder, J., Watson, R., Kallay, T., Kirsh, D., Robb, W.G., Kaji, A.H. and Coil, C.J. (2017) A Randomized Controlled Trial on the Effect of a Double Check on the Detection



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