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### Hands-free technique in the operating room: reduction in body fluid exposure and the value of a training video.

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#### Abstract

**OBJECTIVES:** This study sought to determine if (1) using a hands-free technique (HFT)--whereby no two surgical team members touch the same sharp item simultaneously--> or = 75% of the time reduced the rate of percutaneous injury, glove tear, and contamination (incidents); and (2) if a video-based intervention increased HFT use to > or = 75%, immediately and over time. **METHODS:** During three and four periods, in three intervention and three control hospitals, respectively, nurses recorded incidents, percentage of HFT use, and other information in 10,596 surgeries. The video was shown in intervention hospitals between Periods 1 and 2, and in control hospitals between Periods 3 and 4. HFT, considered used when > or = 75% passes were done hands-free, was practiced in 35% of all surgeries. We applied logistic regression to (1) estimate the rate reduction for incidents in surgeries when the HFT was used and not used, while adjusting for potential risk factors, and (2) estimate HFT use of about 75% and 100%, in intervention compared with control hospitals, in Period 2 compared with Period 1, and Period 3 compared with Period 2. **RESULTS:** A total of 202 incidents (49 injuries, 125 glove tears, and 28 contaminations) were reported. Adjusted for differences in surgical type, length, emergency status, blood loss, time of day, and number of personnel present for > or = 75% of the surgery, the HFT-associated reduction in rate was 35%. An increase in use of HFT of > or = 75% was significantly greater in intervention hospitals, during the first post-intervention period, and was sustained five months later. **CONCLUSION:** The use of HFT and the HFT video were both found to be effective.

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