

Potential Educational Delivery Methods and Reduced CLABSI Rates

Method	Examples and Outcomes
Lecture	Pérez Parra et al. found that a 15-minute lecture for all intensive care unit health care personnel, highlighting 10 of the evidence-based strategies in the US Centers for Disease Control and Prevention's (CDC's) 2002 guidelines, resulted in a reduction in CLABSIs from 4.22 infections to 2.94 infections per 1,000 catheter-days. No other interventions to impact CLABSI rates were undertaken beyond this education. ¹
Video Training or Computerized e-learning	In addition to traditional lecture formats, video training or computerized e-learning can be valuable methods for delivering education. ²⁻⁴ Comer et al. found Web-based CLABSI training useful as a stand-alone educational method in improving clinician knowledge and retention of knowledge over time. ² Guerra et al. found e-learning to be an important and effective tool in bringing updated information to health care personnel in a resource-limited country. ⁴
Self-Study Modules	Self-study modules allow health care personnel to read materials at their own convenience and pace. This approach to education, along with lectures and posters, was successful in reducing CLABSI rates from 4.9 to 2.1 infections per 1,000 catheter-days in one organization over a two-year period. ⁵
Combined Didactic Education and Hands-on Training	Combining didactic education with hands-on training can be useful in ensuring that staff members have both the necessary knowledge and the ability to perform given tasks, whereas didactic instruction alone, although useful in transferring knowledge, may not always change behavior. ⁶
Simulation-Based Training	Simulation-based training is becoming more widely used, replacing the "see one, do one, teach one" apprenticeship model that facilitates inconsistencies in practice and the potential promotion of incorrect practices; this method of training allows for realistic and repetitive practice in a controlled environment while avoiding patient harm. ^{7,8} Researchers have found this method of education and training to be effective in reducing CLABSIs. For example: <ul style="list-style-type: none"> • Barsuk et al. reduced CLABSIs by 84%, from 3.2 to 0.5 infections per 1,000 catheter-days.⁹ • Khouli et al. reduced CLABSIs by 71%, from 3.5 to 1.0 infections per 1,000 catheter-days.⁷

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