



Fig 1. The trend of compliance with each central line insertion bundle component between March and October 2013.

Despite the fact that the goal of “Zero CLABSI” was reached during this observational study of 205 CVC insertions, the overall compliance with all components of the CVC insertion bundle was only about 70% in our ICU, especially during the initial and late stages of our project. This compliance is much lower than the 96%-99% experienced by Khalid et al.¹ The low compliance could be explained by lack of experience during the early stage and lack of maintenance during the late stage. It suggests that we should work harder to find out the deficit of this project and further enhance compliance.

When we investigated adherence to each component of the CVC insertion bundle, we found that in contrast to 100% compliance with hand hygiene and use of CHG, compliance was lower for avoidance of femoral venous access site and ensuring a maximal sterile barrier. This reveals that adherence with each component of a bundle may be different, and this kind of improving the quality of care process warrants more detailed investigation so each institution providing care can find out which specific areas have low compliance. In our ICU, it reminds us that our first priority is to enhance the compliance of 2 specific components of the CVC insertion bundle: ensuring maximal sterile barrier and optimal site selection.

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Reply: Compliance with central line insertion bundles in an intensive care unit

To the Editor:

The letter by Liang et al signifies the ongoing efforts to reduce central line-associated blood stream infections (CLABSI) in developing countries. The authors evaluated “insertion” and “maintenance” bundles for central venous catheters, but had problems achieving perfect compliance despite eliminating CLABSI for 8 consecutive months. This is likely because even partial compliance with bundles has shown reductions in CLABSI in previous studies.^{1,2} The authors describe their “insertion bundle” but do not elaborate on the “maintenance bundle” and its compliance rates, which are equally important in reducing CLABSI and could be the predominant factor in eliminating their CLABSIs. It would also be interesting to know if they observed any reduction in the number of total catheter days in their patients.

The main barriers faced by the authors during insertion were inability to achieve maximal sterile precautions and nonfemoral site selection, whereas they had excellent compliance with hand hygiene. These challenges are different from what we faced.³ Hand hygiene compliance in our study was done from random audits as opposed to the direct observation used by Liang et al. This could explain the difference in hand hygiene compliance and emphasizes the need for a standardized surveillance system.⁴ Use of full barrier precautions and nonfemoral site selection in our experience can be improved if mandated. Use of a unit-based quality nurse, in addition to education and reinforcement strategies, can also help improve overall bundle compliance.⁵

Nonetheless, our study and the results reported by Liang et al should encourage practitioners in developing countries to continue improving infection control practices, regardless of the geographic location of hospitals and demographics of patients. Every little improvement counts in reducing patient morbidity and the financial burden that results from CLABSI.

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