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Extract:

In this issue of The Lancet Infectious Diseases, Erwin Ista and colleagues present the results of their systematic review and meta-analysis [8] about the effect of bundle strategies on CLABSI incidence in 2370 ICUs (including adult, paediatric, and neonatal settings) worldwide. Their review [8] assessed the effectiveness of central-line bundles (insertion and maintenance or both) in preventing CLABSIs.

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It is the largest—and, in our opinion, the best—completed review in its scientific field. Although the main outcome that bundle strategies significantly reduce CLABSI incidence (incidence risk ratio 0.44 [95% CI 0.39–0.50], $p < 0.001$) is not surprising, the review [8] offers some unanticipated and important findings. Variation of baseline incidence has a geographical distribution with lower incidence in high-income countries. Some settings with higher baseline incidence had larger CLABSI reductions, but multi-faceted interventions in

hospitals with limited resources (IRR 0·47 [95% CI 0·40–0·54]) were equally effective as in high-income settings (0·44 [0·38–0·51], $p=0\cdot77$). Ista and colleagues' review [8] also investigated the role of performance indicators and, to little surprise, reported that such information is often missing and, when provided, of rather low quality. The absence of reporting process indicators is a general shortcoming of infection control studies; such information would help to assess the translation of behavioural interventions into practice change at patient bedsides. Finally, the effect of bundle strategies is sustained over time. The reason for sustainability is not quite clear, but culture changes because of the multimodality of CLABSI interventions are probably at the heart of it.

Reference:

Zingg, W. and Pittet, D. (2016) Comment: Central-line bundles need a multimodal implementation strategy. *The Lancet Infectious Diseases*. 16(6), p.631–632.

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