REDUCING CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS

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The rate of bloodstream infections caused by central intravenous lines in hospitals can be reduced to almost zero, saving over $200 000 per year, if a modified central line maintenance procedure developed by a group of Victorian researchers is used, according to a study published in the Medical Journal of Australia.

About 4000 central line-associated bloodstream infections (CLABSIs) occur in Australian intensive care units each year, with a mortality rate of between 4% and 20% at an estimated cost of $36.26 million a year. Each CLABSI case adds an extra 2.5 days in the ICU and an extra 7.5 days in the hospital.

Despite the introduction of improved insertion procedures and care of central lines, the international CLABSI rates still range from 0.9 to 3.6 cases per 1000 central line-days.

Research undertaken by a combined ICU and ID research team, conducted a before-and-after study of adult patients admitted to the University Hospital Geelong ICU.

The CLABSI Prevention Program or the central line bundle of care, introduced by the University Hospital Geelong ICU and the Infection Control Service in 2009, included central line insertion standard operating procedures with the use of a Biopatch – a dressing proven to reduce catheter-related infections – as well as daily body wash using an antiseptic agent, daily reviews and nurse follow-ups.

The average CLABSI rate dropped from 2.2 infection cases per 1000 days while on the central line before the 2009 intervention to 0.5 infections per 1000 central line days in the post-intervention period.

“In real terms, the reduced CLABSI rate equates to 15 fewer cases of CLABSI for the post-intervention period with an estimated total reduction in ICU length of stay of 38 days, hospital length of stay of 113 days and resultant cost saving of about $210 000”, the researchers concluded.

“A central line care bundle … can effectively reduce the CLABSI rate to zero and … this zero CLABSI rate can be sustained.”

The researchers acknowledged that validation of their results by other centres would provide further support for their findings.

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