HealthManagement
Promoting Management and Leadership

Dirty laundry cause of infections

New research suggests that "dirty" linens in hospitals could be a source of sporadic outbreaks of Clostridium difficile infection. This is because laundering of contaminated hospital bedsheets does not completely remove all traces of C. difficile, a bacteria that causes infectious diarrhoea, according to the research published in the journal Infection Control & Hospital Epidemiology.

Researchers concluded that thermal disinfection conditions currently required by the UK National Health System are inadequate for the decontamination of C. difficile spores. There may be potential to spread C. difficile back into the hospital environment as linens could be a source for outbreaks at other healthcare facilities through businesses that collect, launder and redistribute rented linens to multiple hospitals and care facilities, as is the case at NHS facilities.

For this study, the researchers inoculated swatches of cotton sheets with C. difficile. The swatches were then laundered with sterile uncontaminated pieces of fabric using one of two different methods:

- In a simulated industrial washing cycle using a washer extractor with and without detergent, or
- Naturally contaminated linens from the beds of patients with C. difficile infection were put through a full commercial laundry where they were washed in a washer extractor with industrial detergent, plus drying and finishing cycles (according to current National Health Service-UK's healthcare laundry policy).

The research team measured the levels of contamination before and after washing. Both the simulated and the commercial laundering via a washer extractor process failed to meet microbiological standards of containing no disease-causing bacteria, the researchers found. The full process reduced C. difficile spore count by only 40 percent, and this process resulted in bacteria from the contaminated sheets being transferred to the uncontaminated sheets after washing.

"The findings of this study may explain some sporadic outbreaks of C. difficile infections in hospitals from unknown sources, however, further research is required in order to establish the true burden of hospital bedsheets in such outbreaks," said lead study author Katie Laird, PhD, Head of the Infectious Disease Research Group, School of Pharmacy, De Montfort University, Leicester, UK.

The research team, which also includes PhD student Joanna Tarrant, is working closely with the Textiles Services Association in the UK to continue research to find which combination of laundering parameters will remove C. difficile spores from hospital bedsheets.

Source: Society for Healthcare Epidemiology of America
Image Credit: Pixabay

Published on : Wed, 24 Oct 2018