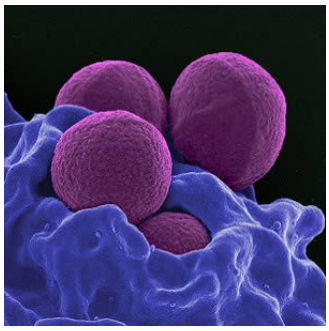
ICU
MANAGEMENT & PRACTICE

Implementing Antimicrobial-Stewardship Programme in ICUs



Antimicrobial resistance is a major healthcare challenge, especially in the intensive care unit (ICU) as ICU patients are more susceptible to healthcare-associated infections (HAIs). It is also a severe problem in ICus because patients are critically ill and immuncomprised and have undergone major surgical procedures. Most ICUs do not have effective infection-control programmes in place.

Previous research shows that ICU patients are five to ten times more likely to acquire HAIs s compared to patients in general wards. This not only increases medical costs but also prolongs ICU stays and results in greater morbidity and mortality. Antimicrobial stewardship programmes may help combat antimicrobial resistance as well as improve clinical outcomes and reduce medical costs.

A study was conducted to evaluate the long-term effects of antimicrobial-stewardship programmes in the ICUs. The impact of an online comprehensive antimicrobial stewardship programme (OCASP) on patient outcomes was evaluated over the course of 11 years.

Patient records five years before and six years after the implementation of the OCASP were analysed. Specific factors that were considered include antimicrobial consumption, expenditures, duration of treatment, incidence of HAIs, prevalence of HAIs caused by antimicrobial-resistant strains, and crude or sepsis-related mortality of patients.

Results showed that patients in the post-OCASP period were older, had greater disease severity, longer ICU stays and were more likely to receive antimicrobials. However, they had lower antimicrobial expenditures and crude and sepsis-related mortality. Overall antimicrobial use increased significantly before OCASP implementation but decreased after implementation. In addition, administration duration of all antibiotics were significantly shorter after implementation as was the incidence of HAIs. There was an increase in the proportion of HAIs caused by carbapenem-resistant Acinetobacter baumannii relative to all A. baumannii infections.

These findings suggest that the implementation of an OCASP in the ICUs can reduce antimicrobial consumption as well as expenditures and will not compromise the quality of healthcare.

Source: Journal of Microbiology, Immunology and Infection
Image Credit: Flickr

Published on : Tue, 30 Aug 2016