

## POSTER SYMPOSIUM – P16

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# Audit of Antimicrobial Prescribing and Adherence to Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital Critical Care Medicine Guidelines in Patients Admitted to Adult Intensive Care Units in RIPAS Hospital, Brunei Darussalam

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### OBJECTIVES

Antibiotic therapy is used extensively in intensive care units, where up to 20% of nosocomial infections are acquired. Their unnecessary use contribute to resistant microbes. However, if inadequate, they are associated with significant mortality. This audit assessed antibiotic prescribing in adult intensive care units (ICUs) in RIPAS Hospital, Brunei Darussalam, and prescribing adherence to RIPAS Hospital Critical Care Medicine (CCM) guidelines.

### MATERIAL AND METHODS

Thirty-two patients admitted to medical and surgical adult ICUs at RIPAS hospital were randomly selected over a 3-month period (April to June 2017). Antibiotics must be prescribed by critical care medicine (CCM) doctors. Excluded criteria were patients electively admitted to surgical ICU for post-operative observation and patients who did not receive antibiotics. Data collection included the first five antibiotic drugs prescribed by CCM doctors and whether prescribing was empirical or definitive. CCM guidelines adherence were determined by appropriateness of antibiotic prescribing, de-escalation, stopping within time limit and antimicrobial sensitivity.

### RESULTS

108 antibiotics prescribed to thirty two patients were audited. Prescribing was empirical in 63% and definitive in 37%. They were mostly prescribed for ventilator-associated pneumonia (26%), followed by community-acquired lung infections (25%). Cultures were positive in 71% of antibiotic prescribed, with 63% isolated from endotracheal tube or sputum and 31% from bloodstream. Almost all (98%) antibiotic prescribed were sensitive to isolated microbes. However, two definitive cases of multi-drug sensitive *Acinetobacter baumannii* were treated with Colistin antibiotic, which is reserved for multi-drug resistant pathogens. Adherence to CCM guidelines were varied. Antibiotic therapy was appropriate in 89 out of 108 (82%) cases. Most of them (78 cases or 72%) were discontinued within time limit (five to seven days). Only 5% (5 out of 108 antibiotics) were de-escalated, even with antimicrobial sensitivities available.

### CONCLUSIONS

Tailoring antibiotic choice to antimicrobial sensitivity and treatment duration are important to avoid growth of resistant pathogens. Prescribing must be judicious, especially where pathogens are classically multi-drug resistant, including *Acinetobacter baumannii*. Thus, antimicrobial prescribing adherent to CCM guidelines must be further improved.

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