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## Antibiotic stewardship: Optimising the administration of antibiotics in critically ill patients

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Optimal outcome and a reduction in the potential for resistance require that appropriate pharmacokinetic (PK) targets are achieved. Consequently, we need to target drug concentrations that are significantly higher than those conventionally presumed to be adequate. Drug exposure varies according to the molecular weight, degree of ionisation, protein binding and lipid solubility of each agent. In critically ill patients, hypoalbuminaemia increases the free fraction of hydrophilic drugs, which in turn increases the volume of distribution and clearance (CL), both of which result in reduced drug levels. Similarly, augmented renal clearance (ARC), defined as a creatinine clearance (CL<sub>cr</sub>) of >130 mL/min/1.73 m<sup>2</sup>, which occurs frequently in critically ill patients, particularly younger patients with normal or near-normal creatinine levels, may also significantly reduce drug exposure. Studies demonstrated a greater mortality and lower cure with ARC, particularly with the additive effects of obesity, hypoalbuminaemia and increasing resistance, if conventional dosages are used. These concepts apply to antibiotics targeting Gram-negative and -positive organisms. Knowledge of PK and the resistance profiles of organisms in each environment is necessary to prescribe appropriately. This article discusses these issues and the doses that should be used.

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## Development and validation of observation checklist of practice on life skills among children with specific chronic illness

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The present study was made as an attempt to develop and validate an observation check list to assess practice of life skills among children with specific chronic illness (asthma and epilepsy). The items for the checklist were generated based on review of literatures, focus group discussion with ill children, parents and psychologists, physicians, school nurse, headmasters and school teachers; personal interview with ill children; consultation and discussion with experts in the subject of life skills. After generating the check list, content validity and reliability of the check list were established by experts. An exploratory analysis was carried out with this checklist (42 items) from 20 high school students with specific chronic illness studying in 8th and 9th standard. The check list was graded with rating scale (very good, good, average and poor), to assess the practice of 7 life skills. Internal consistency for the check list was examined using Cronbach's Alpha (.795). India is a second most populous country in the world, with over 1.3 billion people (Demographics of India, May, 2016) more than sixth of the world population. India has more than 50% of its population below the age of 25. The adolescents make the future of nation. The physical and mental changes that herald adolescence are the most visible and striking markers of this stage. Their developing brains bring new cognitive skills that enhance their ability to reason and to think abstractly. They develop emotionally, establishing a new sense of who they are and who they want to become.

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