

DRUG PROFILE**ANTIMICROBIAL DILUTION PROTOCOLS FOR PARENTERAL ADMINISTRATION IN CHILDREN**

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Abstract: Fluid overload and resultant complications like congestive cardiac failure, pulmonary edema, tissue breakdown, delayed healing, poor gastrointestinal function, and increased mortality are not uncommon when treating sick children. The volume of diluents for multiple parenteral antibiotics that very ill children need is often overlooked when calculating fluid volume. The recommended dilution fluids for initial and final dilution of antibiotics are detailed in this article. The advantages of administering costly antimicrobials as diluted solutions to reduce wastage and achieve cost savings are highlighted. The advantages of an institutional antimicrobial dilution protocol for children are thus emphasised.

Keywords: Antimicrobials, Dilution protocol, Fluid restricted conditions, Cost saving.

Points to Remember

- *Proper dilution of antimicrobials is critical for safe and effective intravenous administration in children, especially in fluid-restricted patients.*
- *Using fully diluted solutions of expensive antimicrobials can reduce wastage and result in significant cost savings, especially in resource-limited settings.*
- *Utilize the MCIA formula to determine the minimum diluent volume required for IV administration, maximizing drug concentration while minimizing fluid load in fluid-restricted patients.*
- *Antimicrobial administration should be tailored to the individual child, considering factors such as age, weight, fluid status and the specific drug's pharmacokinetics and pharmacodynamics.*

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Note

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