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**Standard Intent:**

Multiple-dose vials (MDVs) are widely used in all healthcare settings. By definition, a MDV contains antibacterial preservatives and, according to manufacturer's recommendations, may be used more than once. It is important to recognize that although common preservatives used in MDVs are effective against most bacteria, they are not antiviral agents. It does not protect against contamination when healthcare personnel fail to follow safe injection practices. In addition, contaminating pathogens are able to survive in MDVs for approximately two hours before the preservative takes full effect. It is possible that endotoxins survive even after the preservative inactivates the organism. The contamination rate of MDVs in published studies has been as low as 0% and as high as 27%.

Multi-dose vials should be dedicated to a single patient whenever possible. If multi-dose vials must be used for more than one patient, they should not be kept or accessed in the immediate patient treatment area. If a multi-dose has been opened or accessed (e.g., needle-punctured) the vial should be dated and discarded within 30 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial. If a multi-dose vial has not been opened or accessed (e.g., needle-punctured), it should be discarded according to the manufacturer's expiration date. The manufacturer's expiration date refers to the date after which an unopened multi-dose vial should not be used.

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**MM.15 The hospital has a system for ensuring accessibility, availability, monitoring, and security of emergency medications.**

- MM.15.1 The hospital develops and maintains a standardized set of guidelines for emergency drugs for crash carts and emergency medical bags in accordance with the current Saudi Heart Association recommendations.
- MM.15.2 Emergency medications are available in the patient care units and readily accessible to meet emergency needs.
- MM.15.3 The emergency medications in the crash carts and emergency medical bags are protected from loss or theft using safety plastic seal.
- MM.15.4 Plastic seals of crash carts and emergency bags are stocked in a safe place under supervision of pharmaceutical care or nursing.
- MM.15.5 There is a process in place for monitoring emergency medications and replenishing them in a timely manner after use or when expired or damaged.
- MM.15.6 The hospital maintains documents of emergency medications inspection on every shift by nursing staff.
- MM.15.7 The hospital maintains documents of emergency medications inspection every month by pharmaceutical care staff.