

What are the most common drugs and doses delivered by syringe infusion?

Syringe infusion is a system for delivering small-volume parenteral drugs intermittently. Examples of syringe infusion drugs include cephalosporins, h1 antagonists, diuretics, penicillins, aminoglycosides, cardiac drugs, anti-emetics, steroids and other antibiotics. Most of these doses can be diluted in one to 40 mL volumes and infused over periods of one to 120 minutes in standard five to 60 mL disposable syringes.

Why do facilities choose syringe infusion for delivering intermittent small-volume parenterals?

Syringe infusion provides a higher quality clinical outcome, using less nursing labor, for substantially lower material costs. Using syringes eliminates high proprietary drug and container costs, and allows pharmacies to buy economical bulk generic drug vials, reducing or eliminating minibag costs. Hundreds of millions of syringe infusion doses in the United States alone over the past 20 years continues to validate the clinical, operational and economic advantages of syringe infusion.

What are the biggest barriers to implementing syringe infusion?

The labor required to make the syringes is probably at the top of the list. Syringe filling can be tedious and adding the label can be a time-consuming secondary step.

Aren't the higher infuser occlusion pressures dangerous?

Occlusion pressure is not the same as infusion pressure. Syringe infusers deliver just enough pressure to overcome venous resistance and allow infusion. MicroFuse® Infuser occlusion pressures are about the same (10 to 20 psi) as most large IV infusion pumps. The only way to generate high occlusion pressures is by attempting to infuse when the line is clamped. The clamped line will protect the patient from receiving a bolus of air or more serious problems. The infuser occlusion alarm stops the units from infusing.

Why can't I just use my current IV pumps for syringe infusion?

Syringe infusers are designed for a single, simple purpose. They are not programmable, by design, and therefore are easy to use and require minimal inservicing. Syringe infusion is not intended to take the place of programmable pumps, but to provide an inexpensive, low-cost means for delivering intermittent, small-volume parenterals. Using syringe infusers for these drugs frees up the programmable pumps for other patients or therapies.

Do the Baxa MicroFuse Infusers meet the JCAHO requirements for free-flow protection?

"Free flow" in this context refers to the unregulated flow of IV fluids to a patient. In a Special Report from JCAHO released in January 2003, Goal 5 - Improve the safety of infusion pumps, states "... this goal and its recommendations do not apply to syringe pumps or enteral pumps."

The JCAHO position is appropriate given the low risks posed by syringe infusers such as the MicroFuse Infusers. These units are intended to replace gravity-controlled minibags and IV push for small-volume IV therapies, and are not designed for the general use and critical care applications referenced in the guideline.

How do I determine appropriate syringe dilutions and expirations for dose standardization to support syringe infusion?

The MicroFuse Reference Manual provides documentation on dilution and solution expiration. These reference guidelines are intended to supplement drug manufacturers' recommendations and are provided as a service to customers implementing a syringe infusion system. An extensive reference bibliography is provided in the manual as well, providing citations for further study for pharmacists requiring additional information.

What other products support the effective implementation of a syringe infusion program?

Baxa offers a complete system to ensure that pharmacies are successful in implementing syringe infusion - from the MicroFuse Syringe Infusers to comprehensive reference manuals, inservice training videos for nurses and outpatients and specialized IV admixture products. These include devices such as syringe tip caps, specialty needles and vents, the RapidFill™ Automated Syringe Filler, the Repeater™ Pump for IV fluid transfer, collection bags and many more.