



Special *PP&P* Buyer's Guide: **Ambulatory Infusion Pumps**

Ambulatory infusion pumps play an important role in delivering pain control medications, TPN infusions, chemotherapy, and other infusions to patients in both inpatient and outpatient settings. While, traditionally, the purchase of ambulatory infusion pumps have been left primarily to nursing, anesthesia, or other departments, it is vital that pharmacy ramp up their involvement in the selection of these systems. As Robin Keyack, RPh, a clinical resource manager for New Jersey-based Virtua Health, contends, "It's important that pharmacy be involved in these equipment choices to ensure patients receive the safest drug therapy possible. Pharmacy has the expertise to determine the medications and delivery modes that should be used to deliver optimal and safe patient care." As such, pharmacy should work in conjunction with nursing and other departments to determine which ambulatory pumps are best suited to your institution's practices and your patients' needs.

There are several factors to consider when selecting your institution's ambulatory pumps. According to Keyack, "Most good organizations will look at clinical acceptance first." In other words, determine if the pump addresses patient safety in a manner consistent with standards of care at your facility. Look for pumps that allow nurses to program minimum and maximum dosage parameters, which can provide a "safeguard to ensure the right drug at the right concentration will be administered to the patient," suggests David Gray, RPh, director of pharmacy at Douglas County Hospital in Alexandria, Minnesota. Gray also suggests purchasing pumps with "empty bag" and "free flow" alarms, which can alert clinicians to situations that need to be addressed. You should also test the pumps to ensure the reliability of these alarms. Pumps that offer "a confirmation screen for dosages" are also desirable, in Keyack's opinion, and can prevent nurses from administering inaccurately programmed doses.

Ease of use is also an important consideration during the selection process. The pump's display should be easy for nurses to read, and nurses should be able to program the pumps with a minimal number of steps. Gray recommends choosing pumps with a battery life of about 24 hours, as the devices would not typically be used without an external power source "for any longer than that period of time." Nurses and patients will also appreciate pumps that are lightweight, small, and highly portable – not to mention reliable. Frequently malfunctioning pumps can be detrimental to patient care, and as Gray puts it, "If a pump isn't reliable, nurses just aren't going to use it." So be sure to contact a vendor's references to learn how reliable the pumps under consideration have been in real-world applications. Keyack also recommends purchasing pumps that offer tamper-resistance or a "locking system of some kind, which is always important when we're talking about pain medications."

Beyond the devices themselves, it is also critical to evaluate the availability and price of the soft goods – i.e. bags, cassettes, and tubing – utilized in patient care and in compounding the medications delivered by the pumps.

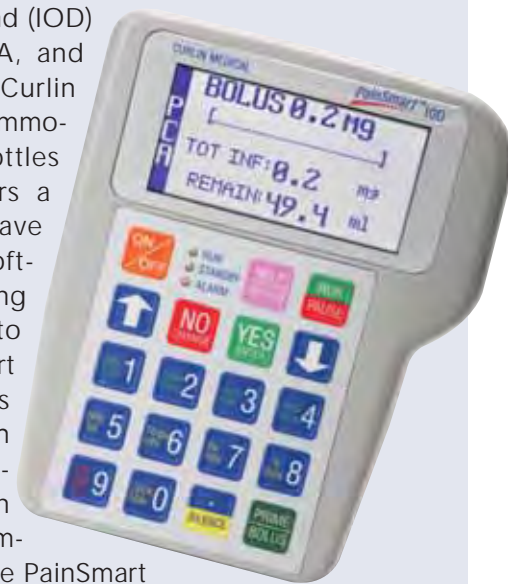
Pharmacy also has the option to either outsource the compounding of medication cassettes and bags or purchase pre-filled bags and cassettes directly from manufacturers.

To aid you in making an ambulatory infusion pump purchase, *PP&P* provides you with descriptions of some of the products available in the market on the pages that follow. **To receive more information on any of the products listed in the buyer's guide, simply circle their corresponding reader service numbers on the free reader service card bound in this issue (page 1).** You can also use the reader service card to renew your free subscription to *PP&P*.

► **B. Braun Medical, Inc.**

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Distributed by B. Braun Medical, the **Curlin PainSmart IOD Pain Management System** is equipped with Information On Demand (IOD) technology for PCA, PCEA, and epidural therapies. The Curlin PainSmart IOD system accommodates syringes, bags, or bottles with one pump and offers a rapid priming feature to save time. The pump's CMS software supports downloading drug protocols from PDAs to pumps. The Curlin PainSmart IOD system also includes built-in safety features such as integral free-flow protection with upstream occlusion detection, as well as programmable medication limits. The PainSmart IOD also prompts nurses to verify and confirm dose changes before implementation, reducing the risk of programming errors. During operation, the pump provides essential infusion data and access to clinical information, including shift and hourly totals.





Buyer's Guide

► Hospira, Inc.

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The **GemStar** line of products offers three models (one for pain management only and the others providing six and seven therapies, respectively) for par-enteral infusion of IV fluid, medications, nutritional fluids, and blood/ blood products. GemStar infusion pumps provide single-channel administration of up to seven different therapies. The compact and portable pumps can be used in hospital or home care environments for multiple ambulatory applications. The rugged units feature custom configurations to streamline programming and facility parameters. The GemStar also includes enhanced safety features with hard limits, free-flow protection, and confirmation screens.



The **GemStar pain management system**, available in two models distinguishable by bumper guard colors, offers patients pain management in a small, lightweight pump with an easy-to-program interface. The GemStar can administer continuous or bolus pain management doses for epidural or IV PCA applications. Custom configurations allow facilities to tailor programming to meet specific clinical objectives and provide hard limits. GemStar units also offer security features such as four keypad lockouts, free-flow protection, and mandatory confirmation screens.

► Smiths Medical

Circle reader service number 28 or visit www.smiths-medical.com

The **CADD-Prizm PCS II Pump** is an ambulatory PCA pump for epidural, IV PCA, nerve block, surgical site, sub-Q, and intrathecal pain management therapies. The pump allows differentiation of epidural infusions by configuring the system with a yellow pump keypad, medication cassette reservoir, tubing set, or lockbox. Smiths' CADD-Sentry Pro safety software includes protocol libraries and allows uploads and downloads of data.



► WalkMed Infusion LLC

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The recently introduced **WalkMed 350VL Ambulatory Infusion Pump** allows users to program continuous infusions, as well as input an upper limit for the total volume to be delivered. The keypad can be locked after programming to prevent accidental delivery-volume changes. The pump is capable of delivering in hundredths (from 0.10 to 19.99 mL/hr) or in tenths (from 0.1 to 30.0 mL/hr) of a mL, and provides system status and delivered volume information at a glance. The standard 9V battery can be replaced while the pump is in lock-out mode without the loss of delivered volume information or system programming. It can be used with 65-, 150-, and 250-mL internal reservoir bags or larger external bags. System alerts help ensure patient safety.



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