

TRENDS & TECHNOLOGY

DeltaVen Closed System Peripheral IV Catheter

This peripheral IV catheter combines the needle, extension tubing, and an optional needle



less connector into one system. Clinicians can feel the insertion of the catheter into the vein during threading that's done by simply sliding one part of the device against another.

It can be used for radiology/CT power injections, with a pressure rating of 330 PSI. It is also compatible with the smallest patients being the only 26 gauge safety catheter available with a priming volume down to 0.2 ml.

Source: DELTA MED North America Inc. <http://www.deltamed.biz>

Defibrillator Pads with Needles

This add-on device improves the delivery of current toward the heart, potentially resulting in higher chances of rescuing patients while causing little to no harm to



the skin. The Zfib device is a 3D printed pad with 180 micro needles on its bottom side. It interfaces with existing defibrillator electrode pads, transmitting their current through the needles. After positioning over the skin, pressure is applied to the Zfib in order to push the needles into the dermis.

Source: Rice University Team, Houston, USA

The Ivenix Infusion System

Ivenix, Infusion System, is developed by Medtech Company. Strikingly more than 50% of adverse drug events involve drug infusion errors. Drug infusion systems can suffer from



issues such as inconsistent fluid delivery, complexity of use, and nuisance alarms. It can also be extremely difficult to monitor older systems remotely, or integrate them with existing hospital information systems. Ivenix has developed its infusion system to address these persistent problems.

Source: Ivenix, Inc. <https://www.ivenix.com>

Rainbow Lite Sensors with Oxygen Reserve Index

Masimo is releasing its new RD rainbow Lite SET sensors that measure the Oxygen Reserve Index (ORi) and RPVi, a new and improved

P l e t h Variability Index (PVi) that relies on multiple wavelengths



of light. This is on top of pulse oximetry capabilities. The technology allows for live fluid responsiveness assessment at a cost much lower than invasive techniques.

According to the company, "ORi is the first noninvasive and continuous parameter to provide insight into a patient's oxygen reserve in the moderate hyperoxic range. In conjunction with SET pulse oximetry, ORi may provide advanced warning of impending desaturation, which may allow clinicians to intervene sooner." Results from a study of 25 pediatric patients is noted, which showed that ORi helped to spot desaturations a median of about 30 seconds before noted on SpO₂. A larger study of adult patients with arterial catheterization and intraoperative blood gases analyses before surgery, demonstrated a relationship between changes in PaO₂ and changes in ORi. It also seems to point to ORi helping to watch the oxygen reserve in titrating patients on oxygen.

<http://www.masimo.com>

Blink's TwitchView for Neuromuscular Blockade Monitoring

This device is used for monitoring the depth of neuromuscular blockade under anesthesia, and

the company claims it is the first stand-alone electromyography (EMG) monitor available in the U.S.

The system consists of a monitor, charging dock, and single use electrode arrays. The arrays can be placed on either hand in a matter of seconds and a press of a button begins "train-of-four" monitoring. The data collected and produced by the device can be dumped straight into the hospital's



electronic medical record.

"TwitchView is a device that streamlines clinical practice and remedies well-documented clinician concerns with currently available products.

Blink Device Company, Seattle, WA 98109

Accuro Device for Epidurals and Spinals

Performing epidural and spinal anesthesia requires a good deal of training and being able to sense when the needle reaches the



desired location. Sometimes a sonographer is required to operate the ultrasound while the anesthesiologist delivers the needle. Accuro, a new ultrasound device, offers capabilities that can alleviate a sonographer from having to help with epidurals and spinals. Compact size makes it extremely portable, easy to manipulate and therefore well-suited to use for a variety of specialized procedures.

Rivanna Medical. USA.

<https://rivannamedical.com/accuro/>

ECGglove for Arrhythmias

ECGglove consists of a common suede glove



that a cyclist might wear, except that the fingertips of the thumb, index, and middle fingers are studded with metal electrodes. By placing the three fingers on a patient's chest near the heart, ECGglove can rapidly record a 3-lead ECG through a module on the user's wrist to help detect a possible arrhythmia. ECGglove even contains retractable ECG cables that can snap onto standard ECG electrode pads to record a traditional ECG.

<https://www.ecgglove.com>

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