TRENDS & TECHNOLOGY

NovaGuard SA

FDA approved NovaGuard SA safety system prevents needle-sticks by providing a mechanism that can be activated to cover the needle immediately after injection. It has an indicator if the shield has been damaged and will become non-functional if that happens to make sure it's disposed of properly. The device is compatible with prefilled ISO standard glass syringes. West Pharmaceutical Services, Exton, Pennsylvania

Sound pick-up device (SPUD)

Stethoscope Technologies has developed a sound pick-up device (SPUD) that's basically just a chestpiece that can be connected to any pair of headphones.

The device is intended for use by paramedics who will be able to slide the SPUD down the person's neck and onto the chest without removing layers of clothing. The attached headphones, having a cord much more flexible than on traditional stethoscopes, can remain comfortably on the person doing the auscultation and hopefully allow for a much quicker diagnosis of whether the heart is beating.

The device is not yet available as a finished product, and the company is looking for investors to begin manufacturing the device.

http://www.stispud.com/Stethoscope-Earpieces-San-Jose-CA.html

Nimbus™ Ambulatory Infusion Pump

Zyno Medical (Natick, MA) won FDA clearance to bring to market its Nimbus ambulatory infusion pump. The device offers both continuous rate and patient-controlled analgesia (PCA) infusions and was designed for intuitive programming by clinicians and easy use by patients.

It's being marketed as a low-cost solution because it's designed for single patient use and doesn't require purchasing new cassettes, changing batteries, or cleaning.

http://www.zynomed.com/products/ambulatory-infusion-system/

SEDASYS Computer-Assisted Propofol Sedation System

The device is intended for delivery of propofol (1% (10 mg/mL) injectable emulsion) by non-anesthesiologist clinicians when performing colonoscopy and esophagogastroduodenoscopy procedures.

The technology allows administration of minimal to moderate amounts of propofol during upper and lower GI endoscopies and for monitoring of patient sedation. According to the company, only adult ASA class I and II patients are eligible to receive propofol via SEDASYS.

SEDASYS System reduces the risks associated with over-sedation because patients who received sedation with the System experienced fewer and less significant oxygen desaturation events http://www.sedasys.com/

The Eko, developed by **Eko Devices** out of Berkeley, California, hooks up to the stem of just about any stethoscope's chestpiece and is paired with a matching app that powers a lot of its features. It can then record exams for later review, display the visualization of the sounds, and control

how the sound comes across to the listener. The app can upload recordings to an EHR or email them to another physician for review.

Clear Guide ONE

Clear Guide Medical, a Johns Hopkins spinoff firm received FDA clearance for its Clear Guide ONE needle guidance system that works with any ultrasound system out there. Previous needle guidance devices, which help make central line placement, needle biopsies, and regional anesthesia easier to perform, use magnetic or mechanical tracking, markers, and require pre-procedure calibration and setup. The Clear Guide ONE simply snaps onto an ultrasound probe and it's ready to go.

The system uses a camera to watch the orientation of the needle above the skin and a computer interpolates where the tip is in order to display the precise location of the needle on the screen.

http://www.clearguidemedical.com/cgone.html

Non-Invasive Hemoglobin (SpHb) Sensor

The rainbow DCI-mini non-invasive hemoglobin (SpHb) sensor. Intended for infants and small kids weighing 3 to 30 kg (6.6 lbs to 66 lbs), the sensor connects to Masimo's Pronto monitor that displays the readings. Finger sensors for hemoglobin have only been available for patients 10 kg (22 lbs) and larger, making catching anemia difficult in small kids without the drama of drawing blood.

The DCI-mini is clipped onto to a child's finger, or a toe on smaller kids, and provides spot-check readings at any time.

http://masimo.com/news/index.cfm#3594

Thinklabs One

Thinklabs One is a new electronic device that fits entirely into the chest piece of the stethoscope and works with any headphones of your choice. It can amplify sounds by more than 100x and provides a variety of audio filtering options to better hear heart murmurs, diastolic rumbles, lungs sounds, etc, etc.

The device can connect to tablets and smartphones to visually display the waveform of the audio using a matching app, which can also record and let you zoom in on specific spots in the recordings.

http://www.thinklabs.com/

Gauss Surgical Blood Loss Measurement App

Gauss Surgical (Los Altos, CA) just received FDA approval for its Triton Fluid Management System, an iPad app that estimates, via a proprietary algorithm, blood loss in surgical sponges just by looking at them.

The app sends the photo to a cloud server for image processing, which in turn sends back an estimate of the amount of blood in the wet sponge. http://www.gausssurgical.com/news/

CLINIPICS

CONGENITAL ABNORMALITIES

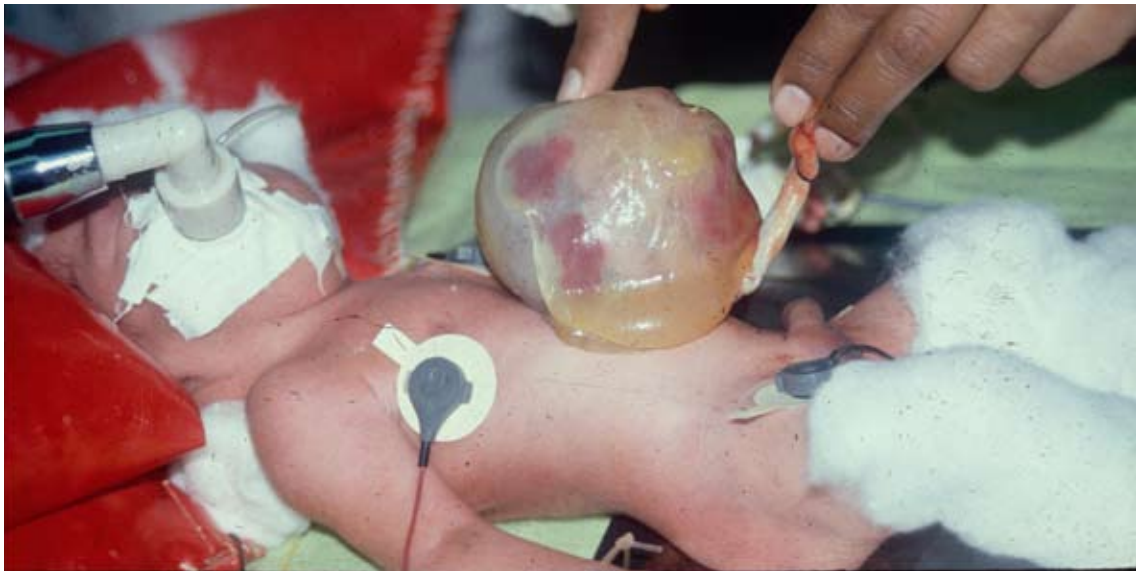

Fig. 1: Evisceration

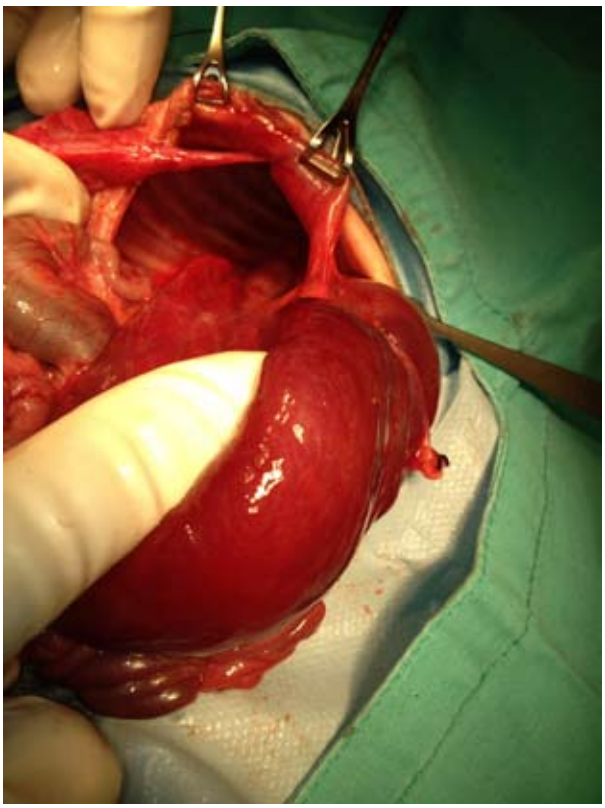

Fig. 2: Absent diaphragm in a neonate

Fig. 3: Evisceration