

ICU Medical Launches NanoClave™ Needlefree Connector to Help Clinicians Better Manage Neonatal and Pediatric Patient Fluids

Designed to help clinicians keep neonatal and pediatric patients safe from infection while effectively managing their fluids, NanoClave will be debuted at three conferences in October

SAN CLEMENTE, Calif., Oct. 15, 2012 – ICU Medical, Inc. (Nasdaq:[ICUI](#)) today announced the introduction of the [NanoClave](#) low-profile neutral displacement needlefree connector, designed to keep neonatal and pediatric patients safe by minimizing flush volumes while providing a safe and effective microbial barrier. NanoClave will be debuted at the [Association for Vascular Access \(AVA\) Annual Scientific Meeting](#) in San Antonio, TX on October 16, 2012, the [National Association of Neonatal Nurses \(NANN\) Annual Educational Conference](#) in Palm Springs, CA on October 17, 2012, and [Infectious Disease Week \(ID Week\)](#) in San Diego, CA on October 17, 2012.

NanoClave helps clinicians keep neonatal and pediatric patients safe from infection while effectively managing their fluids. The compact NanoClave combines a straight fluid path and a residual volume of only 0.02 mL with a clear housing that permits visualization of the fluid path to confirm the connector has been completely flushed after blood draws or administration. NanoClave also includes the same split-septum, straight internal fluid path technology used in ICU Medical's complete portfolio of [needlefree vascular access devices](#), which has been clinically-proven to provide an effective microbial barrier against bacteria transfer and contamination.^{1,2}

"We switched to the NanoClave T-connector extension set in both NICU and PICU not only because of the small, smooth profile and extremely low fluid volumes required to flush, but also because it allowed us to continue using a split-septum design, but with no extra parts like our old T-connector," says Sheryl A. Ruth, R.N.-C, M.S., Nurse Manager at UC Davis Children's Hospital, who specializes in the care of high-risk infants. "Also, the proven Clave technology really appealed to us from an infection control standpoint. We've had great success so far."

Effectively managing patient fluids and electrolyte status is one of the most critical elements of neonatal [infusion therapy](#) and is vital to a healthy transition from the in-utero to ex-utero environment.^{3,4} Neonates face an increased risk for both dehydration and fluid overload, resulting from low renal capacity for urine concentration or dilution.^{4,5} As a result, clinicians must carefully calculate and monitor neonatal fluid and electrolyte requirements. Reducing the volume of flush solution required to clear an IV connector of blood components may help clinicians in these efforts to maintain appropriate patient fluid balance.

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2. Moore C, RN, MBA, CIC. Maintained Low Rate of Catheter-Related Bloodstream Infections (CR-BSIs) After Discontinuation of a Luer Access Device (LAD) At an Academic Medical Center. Poster presented at the annual Association for Professionals in Infection Control and Epidemiology (APIC) Conference 2010, Abstract 4-028.
3. Lorenz JM. Assessing fluid and electrolyte status in the newborn. *Clinical Chemistry* 1997;43:205-10.
4. Aggarwal R, Deorari A, Paul VK. Fluid and electrolyte management in term and preterm neonates. Department of Pediatrics, Division of Neonatology, All India Institute of Medical Sciences. Ansari Nagar, New Delhi.
5. Bell EF, Acarregui MJ. Restricted versus liberal water intake for preventing morbidity and mortality in preterm infants. *Cochrane Database Syst Rev* 2000;(2):CD000503.

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About ICU Medical, Inc.: ICU Medical, Inc. develops, manufactures and sells innovative medical devices used in vascular therapy, oncology and critical care applications. ICU Medical's products improve patient outcomes by helping prevent bloodstream infections and protecting healthcare workers from exposure to infectious diseases or hazardous drugs. The company's complete product line includes custom IV systems, closed delivery systems for hazardous drugs, needlefree IV connectors, catheters and cardiac monitoring systems. ICU Medical is headquartered in San Clemente, California. More information about ICU Medical, Inc. can be found at www.icumed.com.

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