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FOCUS ON:
IV Consumables

icumedical
human connections

Providing you with innovation,
quality, and value in

IV Consumables Technologies

From the infection control properties of our industry-leading Clave™ needlefree connectors, to procedure-ready sets that let you cost-effectively streamline the delivery of care, ICU Medical is 100% focused on bringing you intuitive, patient-centric IV products and services.

We design our products to work within your existing workflows to minimize disruption and maximize the time you spend with your patients.

Warning: Clave connectors may be incompatible with some male-luer connectors including prefilled glass syringes. To avoid damage to the Clave or syringes or male luers which may result in delays of medication administration and possible serious adverse events, users should confirm mating luers or syringes have an internal diameter range of 0.062” to 0.110”. Check the internal diameter of the male-luer connector of the mating syringe prior to using it to access the Clave. Products outside of these dimensional tolerances should not be used.



Enhance Patient Safety



Improve Clinical Efficiency



Maximize Profitability



Optimize Supply Chain

Helping you enhance patient safety and standardize clinical protocols with a full portfolio of infusion technologies



Peripheral IV Catheters

Our safety IV catheter, SuperCath™ 5, is available in a wide range of configurations and is designed to be intuitive for the user, comfortable for the patient, and safe for both—helping you enhance healthcare worker safety and maximize clinical efficiency.

- › Minimize the risk of blood exposure
- › Reduce the risk of needlestick injury
- › Avoid multiple insertion attempts
- › Minimize patient discomfort



IV Sets and Needlefree Connectors

Our extensive portfolio of procedure ready sets lets you use clinically-differentiated Clave connector technology¹ across a broad range of clinical applications, patient populations, and care areas, including anesthesia, general infusion, and in the NICU.

- › Provide a barrier to bacterial ingress²
- › Minimize IV line manipulations
- › Standardize IV sets
- › Reduce setup time and packaging waste

¹ Global Healthcare Exchange (GHX) Market Intelligence data. Connectors, Needleless, Parenterals, [92-100]. 2017-2019. Includes stand-alone needlefree connectors and ancillary direct access devices (two-piece, hemodialysis, non-swabable, and non-patient contact connectors excluded)

² Ryder M, RN, PhD. Comparison of Bacterial Transfer and Biofilm Formation on Intraluminal Catheter Surfaces Among Twenty Connectors in a Clinically Simulated In Vitro Model. Presented at World Congress Vascular Access (WaCoVA) 2018.

ICU Medical was founded more than three decades ago on a simple premise: develop innovative products that help clinicians enhance the safety and efficiency of IV therapy. Our current line of IV consumables is designed to help you standardize infusion therapy clinical protocols—whether for general infusion, central lines, or in the NICU—helping you enhance safety and efficiency while minimizing unnecessary costs.



Disinfecting Caps

With SwabCap™ disinfecting caps on every port or SwabTip™ male-luer disinfecting caps on your disconnected IV lines, we can help enhance the barrier to bacterial ingress while helping you standardize clinical protocols and swabbing compliance.³

- › Provide a barrier to bacterial ingress
- › Continuously disinfect connectors
- › Maximize infection control compliance



Renal Devices

Each of our renal systems is carefully designed to be simple to use and help keep patients safer by helping protect their hemodialysis catheters from contamination while reducing the risk of bloodstream infections.

- › Provide a barrier to bacterial ingress
- › Help minimize the risk of CLABSI
- › Help protect hemodialysis catheters from contamination

³ Posa P. Improving IV Connector Disinfection by Using Human Factors Engineering to Identify Effective, Nurse-Friendly Solutions. Poster presented at the APIC 4th Annual Conference. June 2013.



Helping you enhance patient and clinician safety with clinically-differentiated infection control technology

When it comes to choosing IV consumables technologies, safety is your first concern. Ours too. That's why we have developed a complete line of products—from PIVCs to connectors, to procedure-ready IV sets and disinfecting caps—that have been designed with patient and clinician safety at the forefront. Each of our products has been engineered with unique and proprietary safety features you can trust to help in your clinical safety initiatives.

Help reduce the risk of CLABSIs and catheter occlusions with Clave IV connectors and disinfecting caps^{4,5}

- › Clave technology minimizes entry points for bacteria, maximizes the efficiency of every flush, and has been shown to outperform other connectors in terms of bacterial transfer and contamination.
- › Clave Neutron™ anti-reflux technology may help you reduce catheter occlusions by 50%.⁴
- › SwabCap disinfecting caps disinfect in 30 seconds and provide continuous disinfection for up to 7 days, if not removed.^{6,7}

Help reduce the risk of medication errors and contamination with procedure-ready sets

Minimize IV manipulation and the risk of open systems with prebonded, preassembled IV sets featuring our full line of industry-leading infection control technology.

⁴ Observational In-Vivo Evaluation of the Neutron™ Needlefree Catheter Patency Device and its Effects on Catheter Occlusions in a Home Care Setting, 2011. | ⁵ Kamboj M, Blair R, Bell N, et al. Use of Disinfection Cap to Reduce Central-Line–Associated Bloodstream Infection and Blood Culture Contamination Among Hematology–Oncology Patients. *Infection Control & Hospital Epidemiology*. December, 2015. 36:12. | ⁶ Toxicon Thirty Second Disinfection Study for SwabCap, 2018 | ⁷ Ethox International Microbial Barrier Performance Study for SwabCap, 2009 | ⁸ Guidelines for the Prevention of Intravascular Catheter-Related Bloodstream Infections, 2011 (Updated Recommendations July 2017). | ⁹ Infusion Therapy Standards of Practice, 2021

Clinically-differentiated infection control technology

Clave needfree IV connector technology can help your efforts to reduce infection risks by minimizing entry points for bacteria and maximizing the effectiveness of every flush while helping you comply with CDC⁸ and Infusion Nurses Society (INS)⁹ guidelines.

Silicone Seal and Internal Cannula Minimizes Point of Entry for Bacteria

Specifically designed to minimize contact between the connector's external surface and the internal fluid path upon luer activation, Clave needfree IV connectors minimize entry points for bacteria. Several studies have attributed this feature to a reduction in bacterial contaminants passed through the connector.^{2,10,11,12}

Clear Housing

A clear housing lets you see whether you have completely flushed the connector after blood draws or administration.

Split Septum

Clave's normally closed swabbable split septum design is a preferred feature for needfree connectors⁸

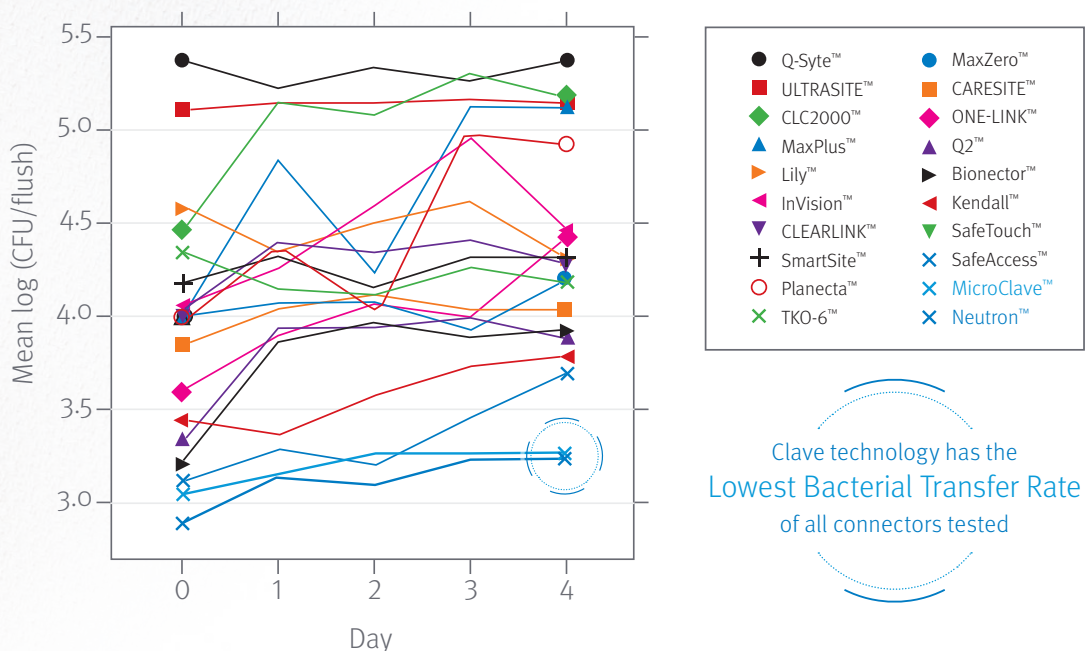
Straight Fluid Path

Clave's straight fluid path allows for efficient clearing of medications, blood, and blood residual with low flush volumes.^{13,14}

Minimal Residual Volume

Clave's minimal residual volume allows for lower flush volumes.

Bacterial transfer rate comparison of needfree connectors



Clave technology has the
Lowest Bacterial Transfer Rate
of all connectors tested

¹⁰ JD Brown, HA Moss, TSJ Elliott. The potential for catheter microbial contamination from a needleless connector. J Hosp Infect. 1997; 36:181-189. | ¹¹ Yebenes J, Delgado M, Saucá G, Serra-Prat M, Solsona M, Almirall J, et al. Efficacy of three different valve systems of needleless closed connectors in avoiding access of microorganisms to endovascular
¹² Bouza E, Munoz P, Lopez-Rodriguez J, et al. A needleless closed system device (Clave™) protects from intravascular catheter tip and hub colonization: a prospective randomized study. J Hosp Infect. 2003; 54:279-287. | ¹³ Data on file at ICU Medical, Low Volume Flush Characteristics of Unique Needleless Connectors M1-1223, Rev. 1. | ¹⁴ Breznock EM, DVM, PhD, Diplomate ACVS, Sylvia CJ, DVM, MS, BioSurg, Inc. The in vivo evaluation of the flushing efficiency of different designs of clear needleless connectors, March 2011.



ClearGuard™ HD antimicrobial barrier caps are clinically proven to reduce the incidence of CLABSI in hemodialysis patients by up to 63%¹⁵

¹⁵ Brunelli, SM et al. Cluster-randomized trial of devices to prevent catheter-related bloodstream infection. *J Am Soc Nephrol.* 2018 Apr;29(4):1336-1343.

¹⁶ Hymes, JL et al. Dialysis catheter-related bloodstream infections: a cluster-randomized trial of the ClearGuard HD antimicrobial barrier cap. *Am J Kidney Dis.* 2017 Feb;69(2):220-227.



Help protect hemodialysis patients with innovative technologies

When caring for hemodialysis patients, details matter. That's why each of our renal devices is carefully designed to help keep patients safer by protecting their hemodialysis catheters and reducing the risk of bloodstream infections.



Antimicrobial barrier caps that are simple to use and highly effective

The ClearGuard HD cap is the first and only device for sale in the US designed to kill infection-causing bacteria inside a hemodialysis catheter hub.

- › Clinically proven to reduce the rate of CLABSI in hemodialysis patients.^{15,16}
- › Features a rod that extends into the catheter hub. The rod and cap threads are coated with chlorhexidine, a well-known broad-spectrum antimicrobial agent.



Needlefree connectors designed for hemodialysis

The Tego™ needlefree connector can help protect your patients' catheters from contamination by creating a closed system when attached to the hub of a hemodialysis catheter.



Improve efficiencies throughout the infusion therapy process with technology designed to standardize nursing protocols

In today's fast-paced clinical environments, time is of the essence. And if you're a nurse, you want to make every second of time you spend with your patients count. ICU Medical IV consumables are designed to let you standardize processes and minimize setup time so you can spend more time caring for your patients.

Standardize your nursing protocols around Clave connectors, featuring a single, clinically-differentiated needlefree IV technology designed to minimize clinical training and in-servicing while enhancing patient safety.



NICU



General Floor



Anesthesia

Improve efficiency and reduce setup time at the point of care by using procedure-ready IV sets that match your clinical need

- > Avoid assembling multiple components at the bedside
- > Limit inventory of different set SKUs to free up shelf space and save time searching for the set you need



Clinically-differentiated Clave technology allows you to use a single clinical protocol throughout the hospital—streamlining workflows and enhancing safety.





Help minimize overall costs while enhancing patient safety across the continuum of care

Reduce catheter occlusions and associated treatment costs


Preventing blood reflux with Clave Neutron has been shown to help you reduce central line catheter occlusions by up to 50%⁴, allowing a hospital that places 2,000 central lines a year to potentially save more than \$266,000 by lowering tPA costs, PIVC replacement costs, and increased length of stay.

A hospital placing 2,000
central lines a year could save
\$266K
a year by switching
to Clave Neutron

When it comes to caring for your patients, every detail matters. That's why each component in ICU Medical's complete line of IV consumables has been designed to provide maximum clinical performance while helping you minimize the cost of care.

Reduce costly central-line associated bloodstream infections

CLABSIs can be very expensive, with an estimated increase in healthcare costs of approximately \$30,919 - \$65,245, with an average of \$45,814 per infection.¹⁷ ClearGuard HD antimicrobial barrier caps have been clinically-proven to reduce the rate of CLABSIs by up to 63% in patients with hemodialysis catheters.¹⁵



Reduce costly CLABSI in
hemodialysis patients
by up to

63%¹⁵

¹⁵ Brunelli, SM et al. Cluster-randomized trial of devices to prevent catheter-related bloodstream infection. *J Am Soc Nephrol.* 2018 Apr;29(4):1336-1343.

¹⁷ Zimlichman, E et al. Health care-associated infections: a meta-analysis of costs and financial impact on the US health care system. *JAMA Intern Med.* 2013;173(22):2039-2046.



Avoid stocking, opening, and assembling several separate sets at the point of care, saving time and shelf space while reducing packaging waste.



Optimize the supply of your essential infusion consumables

As the leader in the design and manufacture of innovative IV sets and consumables, ICU Medical lets you optimize your supply chain while maximizing clinical efficiency and reducing costs.

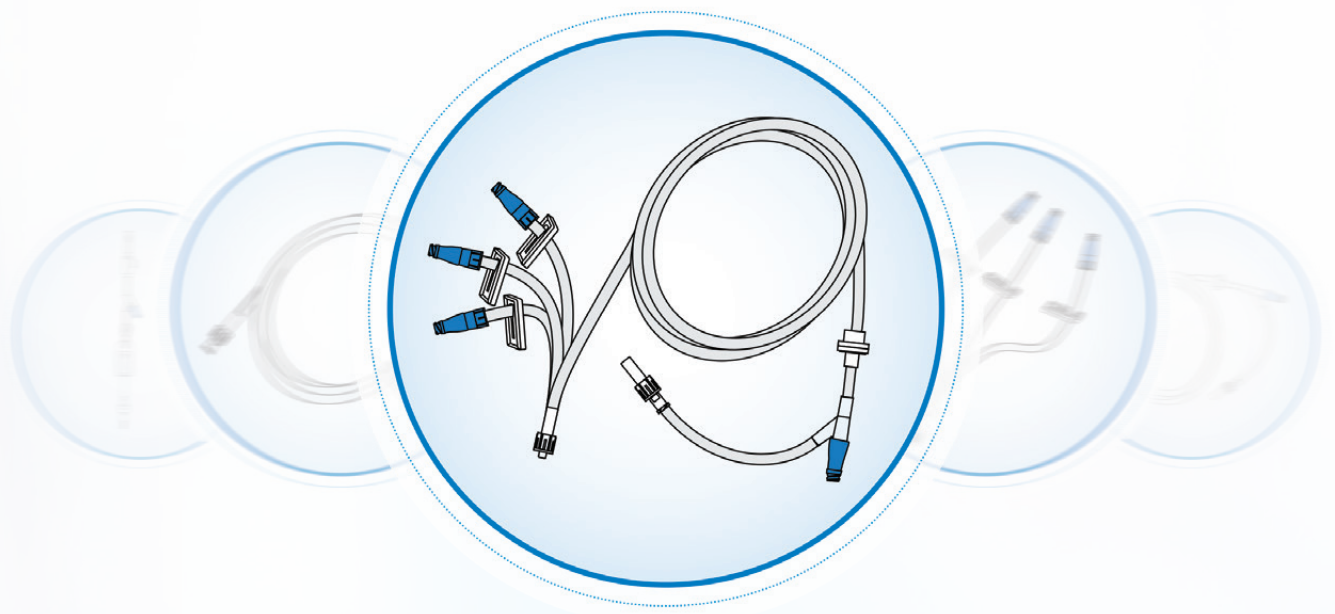
Standardize on a single supplier for your infusion consumables

With ICU Medical, there's no need to settle for second best when it comes to IV consumables. We give you access to our full portfolio of best-in-class components and broadest offering of off-the-shelf IV sets tailored to a range of clinical needs. And as a full-line IV therapy provider, we help you further optimize the supply chain by standardizing on a single supplier across your dedicated and nondedicated IV sets.

Reduce SKUs with procedure-ready sets designed to meet your specific needs

Choose from our broad portfolio to meet your specific clinical need, letting you avoid ordering multiple components while maximizing shelf space and reducing packaging waste.

Choose from a wide-range of procedure-ready IV sets to meet your specific clinical needs





In-Service Training Videos



Step-by-Step Instructional Posters



Live Clinical Training with Documentation

ICU Medical and you

A commitment to exceptional ongoing technical support and clinical education

Our commitment to you doesn't end with the purchase.

We provide a dedicated support organization with a wealth of knowledge, resources, and technical training opportunities to help you maximize the value of your investment in ICU Medical products.

When you choose ICU Medical, you get a true partner who will be with you every step of the way, offering:

- › Best-in-class technical and clinical in-servicing
- › Dedicated clinical nursing and product team specialists available
- › Personalized instructional materials
- › No-obligation clinical reviews to optimize your IV set portfolio

