



Clinical Experts Discuss Fluid Management Strategies in Critically Ill COVID-19 Patients during CHF Solutions Webinar

June 18, 2020

EDEN PRAIRIE, Minn., June 18, 2020 (GLOBE NEWSWIRE) -- CHF Solutions (Nasdaq: CHFS), a medical device company dedicated to improving the lives of patients suffering from fluid overload, announces key conclusions from yesterday's webinar during which experts in fluid management and critical care provided their perspectives. The webinar highlighted the recent publication: *SARS-CoV-2 (COVID-19) and intravascular volume management strategies in the critically ill.*¹ and the role of ultrafiltration in the treatment of patients with COVID-19.

The webinar was moderated by Ravindra Mehta, MD, Professor of Clinical Medicine (Emeritus), Division of Nephrology-Hypertension, Department of Medicine, University of California-San Diego School of Medicine. The panelists were Peter A. McCullough, MD, Consultant Cardiologist and Vice Chief of Medicine, Baylor University Medical Center; Principal Faculty, Internal Medicine, Texas A & M University Health Sciences Center and Claudio Ronco, MD, Full Professor of Nephrology, Department of Medicine, University of Padova; Director, Department of Nephrology Dialysis & Transplantation, International Renal Research Institute (IRRI), San Bortolo Hospital in Vicenza, Italy.

"The vast majority of patients after the initial resuscitative phase are globally volume overloaded," McCullough said. "In at-risk patients, start ultrafiltration early and that may make the situation more favorable for the patients to have a continued response to diuretics and not to wait too long where they are too sick and they are too far behind on fluid balance. These patients really don't have any margin."

Additional clinically important observations made during the webinar include:

- A significant number of COVID-19 patients present with renal dysfunction, of which a large proportion have associated cardiopulmonary complications (cardio-renal syndrome). A particularly important constellation of findings is right ventricular dysfunction and pulmonary hypertension, which can contribute to significant fluid overload.
- Another complicating factor in many critically ill COVID-19-infected patients is cytokine storm and associated hemodynamic instability, which frequently necessitates aggressive hemodynamic support. Large fluid resuscitation volumes may lead to severe fluid overload, even if hemodynamic stability is eventually achieved.
- While some patients who are relatively young and free of underlying comorbidities may respond well to diuretics, others may be diuretic-resistant. In such patients, early transition from diuretics to ultrafiltration may facilitate volume management and lead to a more favorable response, including improvement in respiratory function.
- The constraints placed on caregivers due to COVID-19 limit direct patient contact and render invasive volume assessments more difficult. In this environment, cumulative fluid balance is an important parameter upon which clinicians may have to rely heavily to make treatment decisions. This and other clinical endpoints should guide early utilization of ultrafiltration in appropriate patients, as opposed to its use as a salvage therapy when diuretic therapy has clearly failed.
- Ultrafiltration with portable devices is simple to implement since patients in the ICU already have catheters that make small extracorporeal volume well tolerated.

"Over the last several months, we have gained significant insights about treating COVID-19 patients, especially from the dedicated medical professionals treating patients on the front lines around the globe," said John Erb, CEO of CHF Solutions. "We are pleased that the panel of experienced physicians were able to explain how ultrafiltration can play a key role in the treatment regimen for the most critically ill patients, including COVID-19 patients."

The audio replay of the webcast is available at <http://ir.chf-solutions.com/events>.

1. <https://pubmed.ncbi.nlm.nih.gov/32336959/>

About Fluid Overload in Critically Ill COVID-19 Patients

Fluid overload has become a common issue in COVID-19 patients, and when left untreated, it can be extremely dangerous for patients. When the kidneys cannot remove the excess fluid and waste in the body, patients can experience kidney failure and multi-organ failure. The standard protocol to address fluid overload is to use dialysis to cleanse the blood of excess sodium and waste and return it back to the body. However, at times, there are not enough dialysis machines to accommodate the number of COVID-19 patients who need them. Ultrafiltration therapy is being used to quickly and effectively help stabilize patients until a dialysis machine becomes available, buying time for patients who would otherwise have no therapy available.

About CHF Solutions

CHF Solutions, Inc. (CHFS) is a medical device company dedicated to changing the lives of patients suffering from fluid overload through science, collaboration, and innovation. The company is focused on developing, manufacturing and commercializing the Aquadex SmartFlow™ system for ultrafiltration therapy. CHF Solutions is headquartered in Minneapolis, Minn., with wholly-owned subsidiaries in Australia and Ireland. The company has been listed on the Nasdaq Capital Market since February 2012.

About the Aquadex SmartFlow System

The Aquadex SmartFlow system delivers clinically proven therapy using a simple, flexible and smart method of removing excess fluid from patients suffering from hypervolemia (fluid overload). The Aquadex SmartFlow system is indicated for temporary (up to 8 hours) or extended (longer than 8 hours in patients who require hospitalization) use in adult and pediatric patients weighing 20 kg or more whose fluid overload is unresponsive to medical management, including diuretics. All treatments must be administered by a health care provider, within an outpatient or inpatient clinical

setting, under physician prescription, both having received training in extracorporeal therapies.

Forward-Looking Statements

Certain statements in this release may be considered forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including without limitation, statements about the treatment of patients infected with the coronavirus. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from the forward-looking statements in this release, including, without limitation, those risk associated with our ability to execute on our commercial strategy, the possibility that we may be unable to raise sufficient funds necessary for our anticipated operations, our post-market clinical data collection activities, benefits of our products to patients, our expectations with respect to product development and commercialization efforts, our ability to increase market and physician acceptance of our products, potentially competitive product offerings, intellectual property protection, our ability to integrate acquired businesses, our expectations regarding anticipated synergies with and benefits from acquired businesses, and other risks and uncertainties described in our filings with the SEC. Forward-looking statements speak only as of the date when made. CHF Solutions does not assume any obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

CONTACTS

INVESTORS:

Claudia Napal Drayton
Chief Financial Officer, CHF Solutions, Inc.
952-345-4205
ir@chf-solutions.com

MEDIA:

Jessica Stebing
Health+Commerce
260-336-6202
jstebing@healthandcommerce.com

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Source: CHF Solutions, Inc.