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USCOM 1A technology included in international SCCM paediatric sepsis guidelines

SYDNEY, Australia, Monday 24th February 2020: Uscom Limited (ASX code: UCM) (the **Company** or **Uscom**) today announced the inclusion of USCOM 1A technology in the Society of Critical Care Medicine guidelines for treatment of severe sepsis in children. This represents the culmination of 15 years of research and development and directed clinical practice in the field of sepsis and paediatric sepsis by Uscom scientists and engineers, and its key opinion leaders.

The Guidelines are a consensus document derived from review of worldwide literature over the last 20 years, and published by the Society of Critical Care Medicine, the European Society of Intensive Care Medicine, and the World Federation of Pediatric Intensive and Critical Care Societies. The Guidelines are authored by 52 international authors, from 10 countries including the US, Europe, S America, S Africa and India, a number of whom are USCOM 1A users, researchers or advocates. Sepsis is a serious and often fatal complication of all infectious diseases, including the seasonal infections such as flu and coronavirus.

This international recognition by these global paediatric academies follows the inclusion of our USCOM 1A technology in the Chinese Government Coronavirus national guidelines and in the Wuhan and Hubei paediatric coronavirus guidelines over the last two weeks.

The SCCM Guidelines state “We suggest using advanced hemodynamic variables, when available, in addition to bedside clinical variables to guide the resuscitation of children with septic shock or other sepsis-associated organ dysfunction”, with 11 references to advanced haemodynamic monitoring, advanced monitoring, or hemodynamic variables. Advanced monitoring devices which can be used for direct titration of treatment are defined as “invasive arterial blood pressure monitoring with pulse contour analysis, ultrasound Doppler of the ascending or descending thoracic aorta (suprasternal [USCOM 1A] or esophageal Doppler), cardiac ultrasound/echocardiography.....”

The guidelines also state that “in all settings, the need for fluid administration should be guided by and advanced monitoring, when available”. Additionally for vasoactive treatment the Guidelines state “once cardiac ultrasound/echocardiography or other advanced monitoring is available selection of vasoactive therapy should be driven by individual patient physiology. For inodilators the Guidelines state “77% of panel members reported at least sometimes using inodilators in children with septic shock who had evidence of persistent hypoperfusion and cardiac dysfunction despite other vasoactive agents, typically in a PICU with advanced hemodynamic monitoring available.” The USCOM 1A is an advanced haemodynamic monitor widely used in paediatric sepsis because it is non-invasive, accurate, easy to learn, and takes less than 5 minutes to perform. It is also the only hemodynamic monitor to provide comprehensive normal reference values and management protocols for all ages and patient groups, allowing individually precise diagnosis and treatment.



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Executive Chairman of Uscom, Associate Professor Rob Phillips said, *"We are proud of our nearly two decade contribution to the management of sepsis in Children and adults. This SCCM guideline recognises the effectiveness of our USCOM 1A in the diagnosis and treatment of the life threatening complications of serious infections at a time of increasing global risk. Our role in the management of seasonal infectious diseases has already been confirmed in China with our inclusion in the Coronavirus guidelines for adults and children. In China new Government recommendations are driving hospitals to acquire recommended monitoring devices to improve patient treatments during this, and in preparation for future epidemics. We believe that seasonal infectious diseases will become a critical focus for global medicine and the USCOM 1A will be critical to the cost-effective management of large numbers of critically ill patients with sepsis. These seasonal infections are not limited geographically and during the 2017-18 flu season in the US ~45m people were infected, 810,000 were hospitalised and more than 61,000 died, and the potential for coronavirus to spread to the US, Europe and Middle East is increasing. These guidelines also provide evidence that our expanding sales teams in China, Europe and the US can take to hospital managers and decision makers to support USCOM 1A purchasing decisions to improve outcomes in these severely infected patients. The Chinese Government Coronavirus recommendations are driving our current sales activity in China."*

Uscom manufactures and markets the USCOM 1A, the Uscom BP+, and the Uscom SpiroSonic digital ultrasonic spirometry technologies. These premium digital devices are changing the way we diagnose and treat cardiovascular and pulmonary diseases and are platform technologies for eHealth applications. The USCOM 1A provides vital guidance for optimising management of sepsis and the administration of fluid, inotropes and vasoactive therapies in critical care monitoring of children, adults, pregnancy and the elderly. The BP+ and SpiroSonic devices improve diagnosis and management of hypertension, heart failure, asthma, COPD and sleep disorders in the clinical and home care environments.

References: *Ped Crit Care Med.* 2020 Feb;21(2)e52-e106, DOI: 10.1097/PCC.0000000000002198
<https://www.sccm.org/Research/Guidelines/Guidelines/Surviving-Sepsis-Campaign-International-Guidelines>
<https://www.cdc.gov/flu/about/burden/index.html>



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About Uscom

Uscom Limited (UCM) is an ASX listed innovative medical technology company specialising in development and marketing of premium non-invasive cardiovascular and pulmonary medical devices. Uscom has a mission to demonstrate leadership in science and create noninvasive devices that assist clinicians improve clinical outcomes. Uscom has three practice leading suites of devices in the field of cardiac, vascular and pulmonary monitoring; the USCOM 1A advanced haemodynamic monitor, Uscom BP+ central blood pressure monitor, and the Uscom SpiroSonic digital ultrasonic spirometers. Uscom devices are premium resolution, noninvasive devices which deploy innovative and practice leading technologies approved or submitted for FDA, CE, CFDA and TGA regulatory approval and marketing into global distribution networks.

The USCOM 1A is a simple to use, cost-effective and non-invasive advanced haemodynamic monitor that measures cardiovascular function, detects irregularities and is used to guide treatment. The USCOM 1A device has major applications in Paediatrics, Emergency, Intensive Care Medicine and Anaesthesia, and is the device of choice for management of adult and paediatric sepsis, hypertension, heart failure and for the guidance of fluid, inotropes and vasoactive cardiovascular therapy.

The Uscom BP+ is a supra-systolic oscillometric central blood pressure monitor which measures blood pressure and blood pressure waveforms at the heart, as well as in the arm, information only previously available using invasive cardiac catheterisation. The Uscom BP+ replaces conventional and more widespread sub-systolic blood pressure monitors, and is the emerging standard of care measurement in hypertension, heart failure and vascular health. The Uscom BP+ provides a highly accurate and repeatable measurement of central and brachial blood pressure and pulse pressure waveforms using a familiar upper arm cuff. The BP+ is simple to use and requires no complex training with applications in hypertension, heart failure, intensive care, general practice and home care.

Uscom SpiroSonic digital ultrasonic spirometers are high fidelity, digital, pulmonary function testing devices based on multi path ultrasound technology. They are simple and accurate to use and provide research quality pulmonary function testing in small hand held devices that can be used in research, clinical and home care environments. The devices can be coupled with mobile phone applications and proprietary SpiroSonic software platforms with wireless interfacing to provide remote tele-monitoring of pulmonary disease. The devices are specialised for assessment of COPD, sleep disordered breathing, asthma, industrial lung disease and monitoring of pulmonary therapeutic compliance.

For more information, please visit: www.uscom.com.au

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