



Uscom

ASX Media Release

Uscom may improve outcomes and reduce cost in surgery

Poor fluid management costs, and complicates routine surgery

Sydney, Australia: 3rd May 2016: Uscom (ASX code: UCM) (the **Company** or **Uscom**), a revenue stage, cardiovascular and pulmonary health technology company, today released to market the results of research from 524 US Hospitals demonstrating the opportunity for use of the USCOM 1A to reduce medical complications and cost of care associated with routine surgery.

The authors reviewed the Premier Healthcare Research Database over 4 years and examined the records of 655,426 patients undergoing routine surgery in 524 Premier Hospitals throughout the USA to evaluate the use and effectiveness of fluid infusions during the peri-operative period.

The study found that poor fluid management was associated with an approximately 20% increase in complications, length of hospital stay, and cost of treatment for patients undergoing routine surgery. They also reported that fluid management was highly variable between clinicians, and that at least 50% of patients received poor fluid management. The average total cost per patient admission was approximately \$16,397 USD, making the estimated combined patient management cost for the 4 year study \$10.7b USD. The study concluded by recommending continued focus on improving fluid management and the implementation of “Goal Directed Fluid Therapy” to standardise clinical practice.

The USCOM 1A was designed to simplify and improve implementation of “Goal Directed Fluid Therapy” and has been demonstrated to be 90% effective, even in the most difficult of cases, at the leading US Barnes Jewish Hospital in St Louis, and for elective surgery in the UK. If USCOM was adopted as standard of care by Premier hospitals and similar results achieved, approximately \$1b USD in cost would have been saved and surgical complications substantially reduced.

Uscom CEO Associate Professor Rob Phillips said, *“Every Hospital in the world, including those in Australia, the UK and the US, should review their fluid management practices in response to this paper. More than 50% of all patients having routine surgery have increased complications and cost associated with poor treatment with fluids in the peri-operative period. These are complications and costs USCOM use could reduce. This study demonstrates the need for the USCOM 1A in routine surgery, and we will now be pressing our case to hospital administrators worldwide, particularly in Australia, UK and in the US.”*

The USCOM 1A has also been associated with significant cost and life saving benefits in the treatment of sepsis management in Australia and in the UK, and this has been partially attributed to the improved management of fluids, which is central to the care of patients with sepsis.

Uscom manufactures and markets the USCOM 1A, the Uscom BP+, and Uscom SpiroSonic digital ultrasonic spirometry technologies. These premium digital devices are changing the way we diagnose and treat cardiovascular and pulmonary diseases, including hypertension, heart failure, asthma, COPD and sleep disorders. The products are integral for optimising management of sepsis, guidance of fluid, inotropes and vasoactive therapies in critical care monitoring, and in clinical and home care delivered asthma and COPD medications.



Uscom

ASX Media Release

References:

1. Thacker JKM, Mountford WK, Krukas MR, Mythen MG. Perioperative Fluid Utilization Variability and Association With Outcomes Considerations for Enhanced Recovery Efforts in Sample US Surgical Populations. *Annals of Surgery* 2016;263(3):502-510. doi: 10.1097/SLA.0000000000001402
2. Thiel SW, Kollef MH, Isakow W. Non-invasive stroke volume measurement and passive leg raising predict volume responsiveness in medical ICU patients: an observational cohort study. *Critical Care* 2009;39:666-688
3. Hodgson L., Samuels T., Jenkins C., Wakeling H. Stroke volume optimisation in elective abdominal surgery. A comparison between a non-invasive Doppler device (USCOM) and the oesophageal Doppler (CardioQ). *European Journal of Anaesthesiology* 2014;31(52):3 AP5-1
4. Pearse RM, Harrison DA, MacDonald N, et al. Effect of a perioperative, cardiac output-guided hemodynamic therapy algorithm on outcomes following major gastrointestinal surgery: a randomized clinical trial and systematic review. *JAMA*. 2014;311:2181–2190.
5. Spanjersberg WR, Reurings J, Keus F, et al. Fast track surgery versus conventional recovery strategies for colorectal surgery. *Cochrane Database Syst Rev*. 2011;2:CD007635.

About Uscom

Uscom Limited (UCM) is an ASX listed innovative medical technology company specialising in development and marketing of premium cardiovascular and pulmonary medical devices. Uscom has three practice leading suites of devices in the field of cardiac, vascular and pulmonary monitoring; the USCOM 1A, Uscom BP+ and the Uscom SpiroSonic spirometers. All Uscom devices are premium resolution, and deploy innovative and practice leading technologies with FDA, CE, CFDA and TGA regulatory approval, and which are currently being marketed 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, inotrope and vasoactive cardiovascular therapy.

The Uscom BP+ is a supra-systolic oscillometric Central Blood Pressure monitor which measures blood pressure and blood pressure waveforms only previously available using 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 are specialised for assessment of COPD, sleep disordered breathing, asthma, industrial diseases and monitoring of pulmonary therapeutic compliance.

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

Uscom Contacts

Associate Professor Rob Phillips
Executive Chairman
rob@uscom.com.au

Catherine Officer
Company Secretary
secretary@uscom.com.au