

## Q&A with Guy Lowery, President and CEO of ECOM Medical, Inc. bring to market their Real-Time Endotracheal Cardiac Output Monitoring Smart Device



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**CEOCFO: Mr. Lowery, what is the focus for ECOM® Medical Inc today?**

**Mr. Lowery:** ECOM Medical is a medical device company that develops devices based upon ones currently used by anesthesiologists and other practitioners in their daily management of patients. What we do that is different than other companies is we take devices used every day and

incorporate our proprietary technology to turn them into what we term as smarter devices that can monitor patients on a continuous basis, but without changing anything the clinician does. They do not have to insert any new device, go through training, set up or calibrate like other devices. They just put it in like the device they normally use and connect it to our electronic monitor. The monitor provides real time cardiac information to manage the patient. Our idea is to give them the ability to monitor the patient without taking any extra time changing what they do or making things more complicated. That is the strategy behind the company.

**CEOCFO: How are doctors monitoring today or are they not monitoring what they should?**

**Mr. Lowery:** They have many other technologies that they could use. Currently, if a patient is undergoing surgery, clinicians will place electrocardiogram pads on the patient to monitor the electrical signals for the heart. They will also put an arterial line in to monitor blood pressure on a continuous basis or they will put a pressure cuff on the patients arm to monitor blood pressure intermittently. All patients in surgery are monitored for the oxygen saturation level of the blood and there are other devices to monitor the brain in some surgeries. For cardiovascular monitoring they also have very traditional techniques with inserting catheters into the veins or arteries, so the clinician can monitor how much blood the heart is pumping by placing a catheter in the pulmonary artery. There are various ways of monitoring the amount of blood that the heart is pumping and the resistance to blood flow based on the peripheral vascular conditions, what is called the vascular resistance. These in many cases are limited based on the patients and the type of surgery. Also, most other devices do not monitor on a continuous basis. ECOM monitors the patient without any additional risk and allows them to be monitored from what is called the body core. We are in the central part of the body where it is not impacted by the patient being cold or having peripheral artery disease. ECOM does this on a continuous basis. We monitor the heart beat to heart beat and give the anesthetist immediate information, so they can see the change in the status of the patient. This is different than other types of technology currently in use.

**CEOCFO: Would you tell us about your devices and how they are used?**

**Mr. Lowery:** We are developing multiple devices. Two have been cleared through the FDA. The first is an endotracheal tube that is used during standard surgical procedures when patients are intubated. They put the endotracheal tube into

the patient's trachea and inflate an inflatable cuff (a balloon) which allows them to administer anesthetic gases and oxygen to the patient during surgery under mechanical ventilation. We print an electronic circuit on it using our proprietary technology. Using internal impedance to create an electric field we can monitor how much blood the heart is pumping each beat by the changes that occur in that field caused by the blood flowing through the ascending aorta from the heart. This endotracheal tube is placed just like a normal endotracheal tube in the patient's trachea and we monitor from that location on that continuous basis. The second device is a specialized version of an endotracheal tube, which is called a Double-Lumen Endobronchial Tube. That does the same thing with a cuff in the trachea, but it also has an extension that goes in to one of the bronchial tubes. That allows the clinician to isolate both lungs to enable deflating one lung and keeping the patient ventilated on the other lung. Surgeons then do various types of surgeries, going between the ribs with minimally invasive surgical devices without having to crack the patient's chest.

**CEOCFO: *What has been the response from the medical community of or others that should be paying attention?***

**Mr. Lowery:** The response to our approach has been very positive. However, we have limited our sales coverage up to this point so our sales have been limited. We intentionally limited our sales coverage, due to the costs associated building a sales force, until we get to the point of having multiple products in the offerings to where we can get broader product coverage in the market. We just received clearance on the Double-Lumen Endobronchial Tube, and with that we have started expanding our sales staff. We are increasing our sales coverage, going from just a few states with a few people to adding coverage to about two thirds of the country. By spring we will have full national coverage and international coverage as well. The response has been very, very positive. Our approach has been very well received, due to its minimally invasive nature and the fact that it is plug and play, no training involved and no change in technique. [Changing technique] is always something that you want to avoid during the treatment of patients. Procedures are standardized to limit variables. Therefore, having [devices] which do not change technique or increase variability between practitioners has been well received.

**"ECOM Medical has a different approach. We are not changing what doctors do. We take devices that they already use and make them into smarter devices that allow them to improve the management of their patients without additional risks." - Guy Lowery**

**CEOCFO: *What is the key to getting physicians to make the leap?***

**Mr. Lowery:** That is the ultimate question for any medical device company that is introducing something new. It is one thing if to have something that is neat and people say, "That is really creative," and so on. However, if you cannot make the transition from "gee, that would be nice to have," to "Gee, we would like to have that, we need it," then you are going to fail. There is a correlation between the complexity of a device, its cost, the intended application and the need that really dictates whether or not you are going to be successful. Fortunately, patient management in the healthcare reimbursement system emphasizes improving the outcomes, reducing complications and reducing costs. Over the past decade or so it has been shown that if you manage patients during surgery on a proactive and continuous basis you can decrease complications and length of stay. This is not only better for the patient but decrease the cost of healthcare. You can save the health system money by avoiding people having to remain in the hospital for extended periods of time because of complications associated with major organ function delayed recovery following surgical procedures. There have been dozens and dozens of papers published showing that if you keep the patient's blood at the proper level and not have them too dry or too over medicated with fluids during the surgeries they do better, they recover faster, and it reduces the costs. Therefore, we are finding now that with this type of approach that we really have transitioned from the "This would be nice to have," to "We want this, and we need this." We are seeing very good receptions from the hospitals who understand that if they use devices like ours that even though the device costs money, they save money overall. They reduce complications and they save the hospitals and the healthcare system money. This is key, but you also want to tackle the other two hurdles to adoption of a technology. One is that the more difficult something is to use the less the doctor is going to want to use it. We addressed this by making it to where using ECOM devices is no different than what anesthesiologist currently do. They do not have to learn anything new. Then there is the cost factor. We try to price our technology at a point where anything else they might try to use is more expensive. We offer them a product that does not change their technique, is less expensive than the alternatives and will improve the outcome for the patient.

**CEOCFO: *Do doctors care how it works, why it works, as long as you have proven it works?***

**Mr. Lowery:** They do not particularly care exactly how it works. They want to know if what you do and the information you provide is of a quality that will allow them to manage the patient. If you give them a technology, but they are not confident that the results you are showing them are accurate, then they will be very reluctant to adopt that product. We have FDA 510K clearance and we have the clinical data that show accuracy. A study recently published in France shows improved

outcomes and reduction in intensive care time and complications. Doctors need to know devices work. This is important for all of us. As patients it is best that clinicians do not change their practices quickly. We want them to adopt new things that help. But we also don't want them to go with the latest trend that may or may not end up being a benefit. Being interesting is great, but doctors need to know how it works, why it works and how well it works.

**CEO CFO: Are you seeking funding, partnerships or investments?**

**Mr. Lowery:** We have done things differently than other medical device companies. EMI has not raised funds from traditional sources. We have been funded by private investors at relatively modest levels. We are in a process of raising a five-million-dollar equity round. We have raised four million to date and expect to complete the round by yearend. In the early spring we will have another product ready. This product has the same premise and strategy, but will go beyond the endotracheal intubation market. As we get that on the market and establish our US and international distribution capability the company we will do a financing round by more traditional means. We will be looking for either strategic partners or institutional investment for the working capital needed to build inventory and implement the sales infrastructure that will take us to a much higher level than we are at now.

**CEO CFO: What is the takeaway about ECOM Medical for our readers?**

**Mr. Lowery:** That ECOM Medical is a different type of startup. We are not starting with a concept; we have products. We have the technology developed. It has been test marketed and demonstrated in the field, our first two products have been cleared to market in the US. We are on the market and sales are increasing month to month. We are not the traditional startup. We have mitigated the risks that are normally associated with a start-up. The product is well received. Hospitals are buying our products. ECOM Medical has a different approach. We are not changing what doctors do. We take devices that they already use and make them into smarter devices that allow them to improve the management of their patients without additional risks.

